A Hopi House Design Guideline:

Incorporating Culture into the Design

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DEDICATION PAGE

I dedicate this work to my Kaka Hollie. She told me to write that. Haha jokes!!! For reals, this work is for my family. Mom, Dad, Kaka Hollie, Caddo, Joy, Mason, Siyah Verna, Papa Marcus, Siyah Gooset, Meh-Meh(s), Mama'ah Isebelle, Chum, and G.O., Tata Stet, Vava Devan, Vava Taavi, Kaka Povi, Chris, Kylene, Ambreal, Ellie, Marcus, Joe, Akayla, Nungtat, and O'kuwah. You have all been there to support and encourage me to never give up. Always understanding why I haven't been home all the time. Always helping me because I know I can be useless, my sisters know this too well. Always encouraging me when I need it the most. And importantly, making sure that I ate because you all know too well that I love to eat. I love you all so very much!!

This work is also in memory of my Vava Sahna, Vava J.R., and Bah-Bah Ethel. I miss you guys! And vava Sahna…I did it. I didn't break my promise. I love you all so very much!

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Guna'ah!
Eskwali!
Thank You!

ABSTRACT

The Hopi and Tewa community lives in two worlds. One world is the Hopi and Tewa lifestyle that is strongly connected to the culture. The other world is the Western lifestyle with modern conveniences that many Hopi and Tewa members have grown accustomed to. These two worlds are split within the modern Hopi housing which results in split living. Many Hopi and Tewa members are still strongly connected to the culture but cultural practice and the passing of cultural knowledge is becoming less practiced in the homes. The problem is that current Hopi housing does not reflect the Hopi and Tewa cultural needs. Today there are many tools that aid in implementing Western cultural values into the home. There are home magazines, Pinterest, how-to guides, multiple T.V. shows, and Western-trained architects who continue to disconnect the Hopi and Tewa people from their houses. These tools do not incorporate the Hopi and Tewa worldview because the world of architecture continues to move towards the beauty of simplicity. Unfortunately, this creates a struggle of implementing cultural perspective into the house design. Therefore, the need to create a guideline that actively incorporates the Hopi culture will aid in the conscious effort in bringing culture back into the Hopi home. Implementing the Hopi culture into the house design will not only enhance the cultural connection but it will also bring balance between the two worlds that the Hopi and Tewa community lives in.

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PREFACE

I live in two worlds. One world I embrace with my entire being. My heart and soul longs for this world but it continues to be just out of my reach. Every now and then I get a glimpse of this world. It is beautiful and mysterious, so many wonders to explore and understand. However, if you are not careful, it can become a fearful place. Our culture is very secretive and asking too many questions falls out of protocol. It may seem harsh, but this world's tough love prepares you for many cultural responsibilities and teachings of sacred knowledge that will come when the time is proper.

The other world embraces me, wrapping its arms around me in a tight hug. I do not know any other place as well as this one. It is a place of accessible knowledge and provides a much easier and convenient life. But it comes at a price of sacrificing who I am. I share this world with so many individuals that I eventually become a part of the crowd. If I am not careful I can become a drone, a slave to colonization, either viewed as a well-versed scholar or another uneducated Native individual.

I am not the only one who dwells in these two worlds. The entire community on the Hopi Reservation lives in these two worlds and they continue to clash with each other. I am just part of the younger generation within the greater Indigenous community who has been a victim of being disconnected from one's culture because of this two-world reality. For instance, during ceremonial times we feel the most connected to who we are. In fact, the engagement in ceremonial activities is very healing to the point where we have balance. However, when the ceremony is over, everyone returns back to their Western lifestyle in their Western style houses. If Hopi culture is brought into the home

design then there will be a balance between both worlds, Indigenous and Western, within the home. If this is done, I believe more of the Hopi youth, parents, and elders would come together, like in ceremony, to create a better life not only in the home but on the Reservation. That statement is the entire reason why I am motivated to intertwine the Hopi and Tewa culture with architecture.

At the beginning of this project, I didn't know much about Hopi architecture and the importance of defining a Hopi home. Throughout this process, I have learned more of the Hopi and Tewa life and why it is important to integrate the Hopi and Tewa worldview within the house design. Finding a harmonious balance between both worlds is a lesson that is sacred to me and it is the lesson I want to bring back to the community with the help of architecture. As an Indigenous researcher I find that I am honored to be given knowledge, whether that is sacred or public, and entrusted to hand that knowledge down to future generations. That is my personal and communal value of knowing my tribal, cultural, and personal past. Academically and professionally, I understand that I accepted the responsibility to bring awareness of the Hopi worldview to non-Indigenous and Indigenous individuals, which begs the question: how much information can be shared?

There is a distinct line between sacred and public knowledge. While looking through available resources, I found there was an immense interest by anthropologists to know about Hopi ceremonies and practices. It appeared that, in order to understand the Hopi culture, the study of these sacred ceremonies needed to occur. This did not occur in my research because Hopi knowledge is sacred and shouldn't be exploited. However, there is knowledge that can be shared with the public for it can help enrich their lives.

There are several individuals who want to share their knowledge and perspective but they fear saying the wrong thing. Being an insider, which I am in the Hopi and Tewa community, I know the fear that is felt is doubled or even tripled when compare to that of an outsider's fear of misusing the Hopi/Tewa knowledge. An insider knows so much compared to an outsider but knows so little compared to an elder. If something is said or used wrongly, the insider researcher can't run and hide from the mistake. They are a part of the community and will face criticism, and they also have relatives within the community who can easily find them. Insider researches hold a strong feeling of wanting to provide some sort of reciprocity to their community. There are so many ways to give back to the community and some believe that doing the research, writing, and publishing about the issues and developing innovative solutions is an adequate act of reciprocity.

This research project will be published, but my greater intention is for the results to continue building on this idea of an Indigenous housing guideline for it is a "Living Document." This guideline can be used for Hopi housing and, in addition, can be adapted for other tribal nation's housing with further research and storytelling. This dissertation provides a window to the potential of an alternative housing solution for the Hopi people and a starting point to continue with the improvement of an Indigenous housing guideline.

CHAPTER 1. INTRODUCTION

1.1 Introduction

"Nonetheless, the impending loss of cultural traditions with each passing generation calls for a new model of thinking that can swiftly bind Western and Indigenous knowledges in architecture" – Wanda Dalla Costa

Figure 1. The creation of a Hopi Housing Guideline was based on vigorous research, patiently listening to the many stories provided by the Hopi and Tewa people, acknowledging that this is a "living document," and discovering that Indigenous research is and will always be a holistic and non-linear journey.

Source: BriAnn Laban

There is a housing crisis on Hopi lands in Arizona. This causes a general fear of displacement and homelessness amongst our people and is the product of generations of negative external influences. Dire circumstances cause people to merely accept the current and quickest solutions to the housing crisis on the Hopi Indian Reservation. This has resulted in a repetition of poor design and poor construction. Unfortunately, this ultimately perpetuates a poor quality of life for the house and, more importantly, the occupants. “Poor” refers to the substandard conditions that are evident in most of the housing on the reservation. “Poor” refers to the low quantity of housing options available. “Poor” also refers to the inadequacy of the design of the houses that are available to the Hopi and Tewa community. Lastly, “poor” refers to the cultural disconnection between the current housing and its Hopi and Tewa occupants. The unfortunate truth is that many Indigenous communities experience this poverty architecturally, mentally, physically, and spiritually.

During ceremonies, the Hopi and Tewa people share and experience their cultural heritage with each other, creating a deeper sense of who they are and a stronger understanding of the relationship they have with this world. This phenomenon is transforming and healing to the point where balance is returned, but only for a brief moment because, once the ceremonial activities are complete and for those who return to their houses below the mesa, they return to the modern life that the house represents. Living with modern conveniences distracts the Hopi and Tewa people from their Hopi way of life. There is no evidence showing that these modern conveniences will be leaving the lives of the Hopi community anytime soon. However, Native people have been working for generations to create a balance between the worlds they occupy. This

includes incorporating Western and Native forms of law, medicine, education, and now architecture. Like ceremony, architecture can reconnect the individual, family, and tribe back to their spiritual, mental, and physical well-being. Infusing an Indigenous perspective into architecture creates an entirely different type of architecture that works to reconnect occupants back to their worldviews. Merging Hopi culture, Indigenous methodology, and storytelling into the design process will not only create a new Hopi house design guideline for Indigenous and non-Indigenous architects, it will provide the Hopi voice that is currently missing in the Western architectural design process. The need to bring both worlds together is paramount.

Tribal housing dates back to the Hopi ancestors of Chaco Canyon, Mesa Verde, *Awatovi*, and the Aztec Ruins - and each history is different. The ancient and traditional Hopi architecture may have had different histories, but every house had a purpose and a cultural connection. This type of architecture was commonplace until contact from colonial invasion. Once the United States government was established, the settler-colonizers decided that traditional housing did not meet the requirements of a "civilized society." The government felt the need to "suggest" the use of alternative housing for Indigenous peoples. The United States Department of Housing and Urban Development (HUD) stepped in as a more official delegate, eventually helping to establish the Hopi Tribal Housing Authority (HTHA). HUD's mission is "to create strong, sustainable, inclusive communities and quality affordable homes for all."[1] I commend them on the theory of their mission statement, but it has not been carried out in practice on the Hopi

[1] "Mission," U.S. Department of Housing and Urban Development, accessed May 02, 2016, http://portal.hud.gov/hudportal/HUD?src=/about/mission.

Reservation. Indigenous and non-Indigenous writers alike raise the point about how areas, such as the Hopi Reservation, would try to mimic the development of modern planning and architectural style. This continuous act of "blind imitation"[2] on Hopi results in the scattered planning and HUD style houses that do not reflect the Hopi lifestyle. Basically, there are aspects of the Western model of architecture and urban planning that is not suitable to the socio-cultural well-being of the Hopi and Tewa people.

There is an intense need for change regarding the way housing is approached and executed on Hopi, but it has proven difficult to cater to the entire Hopi community and provide residents with culturally adequate housing. According to the 2010 Census, there are 7,185 Hopi and Tewa people who live on the Hopi Reservation and only 2,081 houses, 75% of which are owner-occupied housing units, while the remaining 25% are renter-occupied housing units.[3] In the last eight years, the population has increased, tribal members have returned home, and the diversity of types of housing has increased. The need for culturally-appropriate housing is apparent, but there are many obstacles that prevent the progression of creating housing on the Hopi Reservation that reflect proper cultural needs. One such obstacle, and seemingly the hardest to overcome, is the lack of funding. In 2016, the Housing Authority put in a total proposed Indian Housing Plan (IHP) budget of $44,216,223.[4] From the total budget $12,885,00 was set specifically to

[2] Balkrishna V Doshi, "Cultural Continuum and Regional Identity in Architecture," in *Regionalism in Architecture*, ed. Robert Powell (Singapore: Concept Media/Aga Khan Award for Architecture, 1985), 87-91.
[3] United States Census Bureau, "Hopi Reservation and Off-Reservation Trust Land, AZ," *American Fact Finder,* accessed February 18, 2016, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_AIAN_AIANDP1&prodType=table
[4] "2016 Indian Housing Plan," *Hopi Tribal Housing Authority,* accessed February 18, 2016, http://www.htha.org/images/2016IHP.pdf.

fund 42 homeownership units for the year of 2016-2017.[5] That budget was separated to accommodate each unit construction cost of $306,785 and the planning and pre-engineering budget for these houses were set at $560,000.[6]

In order to stay within budget and to produce as much housing as possible, many organizations, like HTHA, focus on low-income families. This approach isn't terrible, but it isn't great either. At one point in time, everyone on the Hopi Reservation fit into that category of low-income. However, some families now have become financially stable. This financial standing is considered a great accomplishment but, in the case of housing, financial stability works against potential home owners. It is more difficult for the latter group to get a house because there are no housing programs or consultants near Hopi that are geared towards serving the needs of the financially stable. Therefore, the rise of houseless-ness continues.

In the Hopi culture, no one is ever homeless. We are forever connected with this world which we call home. In addition, the clan house will forever be our home. But, the entire clan family cannot all fit in one home. Considering these cultural understandings and worldviews, the term houseless-ness is used. No one is ever homeless, but there are many who remain houseless.

Two physical settings exist: villages on the mesa and the housing below the mesa. This creates two very contrasting living environments. The creation of colonized communities away from the traditional villages resulted in the disconnection from everyday practices of the Hopi culture. One is preserving the Hopi way of life,

[5] Ibid.
[6] Ibid.

spirituality, and culture while the other embraces Western, modern, and mainstream living. I have had opportunities to live in both worlds, and I remain concerned about the imbalance. The new idea that personal independence is preferred over communal living has caused many families to believe that owning a house reflects their "success" and contorts the traditional Hopi sense of place. There is nothing wrong with seeking independence and having something you can call your own; this is one of the many Western customs that the Hopi and Tewa people have adopted. However, this preference for individuality and ownership tips the scales further onto one side leaving life between both worlds unbalanced.

The planning and development of new houses draws us further into the Western world and its ideologies. Designs are inadequate, poorly constructed, and have little to no consciousness in site selection. The design phases of architectural and community planning projects in Indigenous communities, such as Hopi, are limited to the Western-trained architects[7] who only consider the functional, affordable, and sustainable aspects of architecture, meanwhile eliminating the significant cultural aspects that must also be considered. If this imbalance continues then the long-lasting impact will not merely be a visual effect but will instead contribute to a much greater change in the behaviors among the people, especially the youth.[8] For example, Randolph Mahle provides an insight of how the poor quality of modern housing has created a shift away from Hopi culture:

...And like this we don't eat together like this anymore. And that's where things

[7] Wanda Dalla Costa, "Contextualize Metrics + Narrating Binaries: Defining Place and Process in Indigenous North America," In *Cross-America: Probing Disglobal Networks* (2016).
[8] Rina Swentzell, "Conflicting Landscape Values: The Santa Clara Pueblo and Day School [Vision, Culture and Landscape]," Place Journal 7, no. 1 (1990), accessed January 09, 2017, https://placesjournal.org/assets/legacy/pdfs/the-santa-clara-pueblo-and-day-school.pdf.

are supposed to be discussed like we're doing now. All sitting at the table, [asking] how was your day, or what are you thinking about, that's what we all talked about. But nowadays everybody is eating in the living room, watching TV, or here and there. Not like a family… [telling them] 'Come on, come eat.' [them replying] 'Wait, wait, wait.' Or the best word is 'hold on, hold on.' Everybody is hold on. But that's how it was back then, [that] everything and everybody was together.[9]

Community members, as well as myself, have expressed the liking of the modern commodities and privacy in the new houses and would prefer to keep some of them, such as running water. But the pivotal question remains: how can architecture execute a balance between two worlds that so often clash with one another? One promising start would be to incorporate the cultural values, knowledge, and lessons told within the oral traditional stories. (Fig.2)

Figure 2. Architecture approach vs Indigenous architecture approach

Source: Kenneth Boroson Architects, "What is Architecture – Art or Science," accessed November 13, 2016, https://www.kbarch.com/articles/what-is-architecture-art-or-science.
Source: BriAnn Laban

[9] Randolph Mahle, interview by BriAnn Laban, Hopi Reservation, Summer 2017.

For example, the Hopi creation story keeps the Hopi people connected to their culture and worldview. The Hopi creation story tells of how the creator, *Taawa*, created *Sotuknang*, *Kokyangwuti*, *Poqanghoya* and *Polanghoya* and how they worked together to create, destroy, and replenish all four worlds. In order to keep the story concise, this story is retold here in the author's version that has been given through oral traditions. A written version can be found in the *Book of the Hopi*, recorded by Frank Waters and Oswald White Bear Fredericks.

> *It is said that the first world was just endless space with only the Creator, Taawa, existing within it. Eventually, the Creator gave life to his nephew, Sotuknang, and gave him the task of forming the universe. Once he completed his task, he returned to Taawa and he told him to fill the universe with life. With that, Sotuknang created spider woman, Kokyangwuti, and gave her the task of helping create life. Kokyangwuti carries the web of life knowledge, wisdom, and love. To help her complete her task, Kokyangwuti created twins, Poqanghoya and Polanghoya. She then told the twins to create the physical attributes of the world. The twins were opposites, not in a sense of good and evil, but they worked together to create balance throughout the world. Once they completed their first task, Kokyangwuti then told them to go to the earth's poles and keep the earth rotating. Kokyangwuti created all life, plants, insect, animals, and birds using earth and the creation song. Finally, with earth and the creation song, Kokyangwuti created human beings. They were only told to respect the Creator and live in harmony with all life. Eventually, they started to divide and forget about the Creator. There were a few who still remembered their promise and they*

were the ones who were approached by Sotuknang who told them that the world will be destroyed but he will help save those who continued to live life in accordance to the Creator's words. Sotuknang led the people to the where the Ant People lived, and it was with them they were protected from the destruction of the world. The first world was destroyed with fire. After the second world was created and the people emerged. They were told again to respect and live in harmony with all life. But a similar happening occurred again, and the second world was destroyed, this time by water. However, this time, Sotuknang called on Kokyangwuti for assistance and asked her to gather the people who remember and prepare them for the flood. Kokyangwuti placed them in a reed with some food and there they waited. As they waited the third world was created and the people emerged again. Over time the people again began to live in greed and be disrespectful, but this time the Creator told them that if they wanted to continue living they would have to help themselves. They were scared but they knew it was a long and hard journey that they must take. In secret, they made plans and preparations for their journey to find the fourth world. At one of the meetings they heard someone above making noise. They wondered what was making that noise, so they sent many birds up to try to reach the top to see if they can discover who was making the noise. Many birds tried to reach the opening, but they were unsuccessful until a small bird sat on a larger bird's back and road it until the larger bird couldn't go any higher. At that time the smaller bird jumped off and was able to reach the top. Upon reaching the top the small bird met Masauwu, god of death and caretaker of the fourth world. There they talked, and the small

bird asked for his permission to allow the people from below to live in the fourth world. With his permission the people were allowed to live with him in the fourth world, but they had to find their own way up. The small bird returned and told them this. It took several tries before they found the plant that could reach the opening. The bamboo reed was the plant that was strong and tall enough to reach the opening. They began their journey up towards the opening. Finally, they made it to the top. As they emerged, Masauwu was there waiting to greet them.

In the traditional story above, the Hopi people made promises to remember who they are and with each broken promise, there was a terrifying consequence. Upon arriving into the fourth world, the Hopi people were greeted by Masauwu. Before beginning their migration journey, they made a sacred covenant with Masauwu: to be caretakers of the earth by living as peaceful and humble farmers who respect the land and its resources. Today, the people continue to keep their promise to Masauwu and they continue to believe in their worldview. However, with the growing population on Hopi and the influences of other cultures and technology, the disconnect between the Hopi and their way of life has increased.

The Hopi Reservation is now a place where traditional and modern living clash, rather than coincide. Traditional practices are seen, a majority of the time, in the villages, while modern characteristics are found in the contemporary houses below the mesas. There is an obvious split between the community when it comes to traditional and modern living. There are a few who have managed to balance both, but the greater community has yet to find that balance within their homes. Most people in the Hopi community may argue that we are still strongly connected to our Hopi way of life.

However, a closer examination shows that when we return to our modern homes outside of the villages, we revert to living Western, convenient lives.

The current modern housing design on the Hopi Reservation has demonstrated to be an instrument that disconnects the Hopi and Tewa people and prevents them from practicing their cultural values. As a result, the house itself has now become a device that contributes to the silent oppression of the Hopi and Tewa culture. In order to reverse the growing cultural gap that architecture and planning has initiated, HUD, HTHA, and other housing organizations must implement a requirement for the design of a Hopi house to reflect the cultural knowledge and worldview that the Hopi and Tewa people live every day.

1.2 Background: The Hopi Reservation and Its People

In the northeastern corner of Arizona, there are twelve villages that sit among the Black Mesa. The people who live in these villages are the Hopi and Tewa people. Since time immemorial, the Hopi people recognize this area to be *Hopitutskwa*. To everyone else, this area is recognized as the Hopi Reservation and spans more than 1.5 million acres.[10] The isolated highlands

Figure 4. Hopi dry farming. Hopi Reservation, AZ.

Source: Huey, George H.H. *Hopi Indian Farmer*. George H.H. Huey Photography, Inc. Accessed September 22, 2017. http://georgehhhuey.photoshelter.com/gallery-image/Western-History/G00008oa7E7sFjRU/I0000TH9VaqETnkw.

[10] "The Hopi Tribe the Official Website," *The Hopi Tribe* (2017), accessed October 18, 2017, http://www.hopi-nsn.gov/.

are surrounded by desert landscapes, making it a seemingly impossible habitat for any living creature to survive. Over many centuries, the people who reside in the desert landscape have proven to thrive in the harsh environment. (Fig.3)

Hopi culture is composed of traditional knowledge, language, clan system, corn, religious practices, matrilineal structure, and much more. The matrilineal structure not only distinguishes the fact that the women are the individuals who inherit the houses, but it also determines the clan inheritance. One's clan identity is inherited through their mother, creating the matrilineal society in the Hopi and Tewa community. Clans are the primary kinship system and core identifier of all Hopis and Tewas. It is also a key factor in determine the cultural responsibilities among the Hopi and Tewa community. Hopi religion is not merely a set of repeated rituals, but a way of life. Western beliefs of religion are not reflected in how the Hopi people comprehend religion. The religious life of the Hopi people is not independent from their everyday activities. Such activities include planting corn, storytelling, running, fidelity towards cultural practices, stewardship to the earth, and many other exertions. These activities teach the people how they should behave throughout their life. This, in return, helps them to sustain life in the desert and aides in maintaining harmony with the universe.

Languages spoken on the Hopi Reservation include Hopi, Tewa, English, and some Navajo. Before the integration of marriage between the Hopi and Tewa people, the Hopi language connected the Hopi and Tewa tribes together. It is generally understood that Tewa people can both speak and understand the Tewa and Hopi languages, while the Hopi people can only speak the Hopi language and understand the Tewa language. In this way, it is believed that one of the Tewa people's purpose of being on the Hopi

Reservation is to help maintain the Hopi culture. In order for them to do so, the Tewa people needed to know the Hopi language.

There is a story among the Tewa that explains how the Tewa people came to Hopi and how they came to practice the Hopi culture. In order to keep the story concise, this story is retold here in the author's summarized version that has been given through oral traditions.

> *Long ago, the surrounding nations would attack the Hopi people of Walpi and raid their village of their goods. Unable to prevent continuous attacks, the mongwi (leader) from Walpi sent runners in all four directions to seek help from others. Running towards the East, the Hopi runner came upon the Tewa people in New Mexico. He asked the Tewa mongwi if they would help protect the Hopi people of Walpi from raiding parties. The Tewa mongwi rejected the invitation and the Hopi runner returned home to inform the Hopi mongwi. Refusing to accept the answer that was given, the Hopi mongwi sent the runner back to ask again. Upon returning home, the Hopi runner gave the same answer that was given to him the first time. Refusing to give up, the Hopi mongwi sent his runner again to ask a third time and he was given the same answer. Sending the runner to make the request for the fourth time, the Tewa mongwi finally agreed to travel to Walpi and listen to the Hopi mongwi's request. When the Tewa people first arrived, the Hopi mongwi of Walpi was the first to greet them for it was he who sent for them. The Hopi people needed protection from the surrounding tribes from attacking them and raiding their fields. In order to help the Hopi people, the Tewa mongwi took a root of a plant and gave it to the Hopi mongwi instructing*

him to chew it. He then spits it out and gave it back to the Tewa mongwi who then placed it in his mouth. After sucking on the root, the Tewa mongwi was able to speak Hopi. Excited the Hopi mongwi asked for the Tewa mongwi to do the same for him. The Tewa mongwi refused, explaining that the Tewa are there to help them by protecting and maintaining their culture. Therefore, they were the ones who needed to speak and understand Hopi. Even so, the Tewa people continue to retain their identity, language and distinct traditions even while merging with the cultural worldview and religious practices of the Hopi people. After several negotiations between the Hopi and Tewa mongwi, the Tewa settled on the eastern tip of First Mesa. (Fig.4)

Figure 6. Village of Tewa with Sichomovi and Walpi village in the distance.

Source: Hillers, John Karl. 1879. *First Mesa Settlements.* University of Oxford: Pitt Rivers Museum. http://www.prmprints.com/image/451141/first-mesa-settlements.

Figure 7. Hopi villages on the fingers of Black Mesa. First Mesa, Second Mesa, and Third Mesa. Moencopi villages not showing. New Oraibi is also Kykotsmovi.

Source: Google images. *Hopi Mesas Map*. Digital image. Google. Accessed October 5, 2017. http://www.1857ironcountymilitia.com/index.php?title=File:Hopi_Mesas_Map.jpg#filehistory.

The protruding fingers of Black Mesa give the illusion of independent, adjacent mesas. The Hopi people now refer to them as First Mesa, Second Mesa, and Third Mesa. (Fig.5) Together, they carry the twelve existing villages as well as support additional local communities that have expanded from these villages. Prior to the settler invasion and colonization, the Hopi people worked, played, and lived together in these villages.

First Mesa sits closest to the rising sun. On top the narrow table of First Mesa are three villages: Walpi, Sichomovi, and Tewa. Walpi, the mother village of First Mesa, is located at the southwestern tip. The Tewa people settled on the northeastern tip which was given to them by the Walpi residents who called on them for additional protection from the raiding tribes around them. Sitting between Walpi and Tewa is the village Sichomovi, which was the last village to be established on First Mesa.

Second Mesa is nine miles west of First Mesa and carries three of the twelve villages. Shongopovi, the mother village of Second Mesa, sits along the edge of one of

the mesa's projections. Approximately two miles west of Shongopovi, on another protruding mesa edge, there sits the villages Sipaulovi and Mishongovi. Finally, the six remaining villages are located 10-50 miles west of Second Mesa. The mother village of Third Mesa is the village of Oraibi. Sitting below Oraibi is the village of Kykotsmovi. Extending approximately four miles to the north from Oraibi are the villages Hotevilla and Bacavi. Lastly, upper and lower Moencopi are the farthest villages located approximately 50 miles northwest of Oraibi, near Tuba City.

These villages are where the Hopi people have been living for centuries. Archeological studies have proven that the village of Oraibi was built and settled in by 1150 AD.[12] It could be perceived that this scientific fact would prove the Hopi migration story to be true but, for the Hopi people, it works in reverse: oral traditions make this scientific evidence more believable. The Hopi oral traditions state that the ancient Hopi architecture were, and still are, occupied as one of the oldest continuous inhabited space in North America. The Hopi people did not need science to tell them something they already knew, but science needed the story in order to make sense of the findings.

The year 1540 was when the Hopi people met the first *Pahana* (white man).[13] Spanish settlement forcefully expanded over the Hopi mesas until the Pueblo tribes initiated the Pueblo Revolt of 1680 with the intention to remove the foreign influence. It was around this time when many of the older villages relocated from below the mesa to the top of the mesa for better protection. Today, structural remnants of Spanish influence

[12] *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.1. (Arizona: The Hopi Foundation, 1996), 12.
[13] Ojibwa, "The Hopi and the Spanish," *Native American Netroots*, posted January 17, 2012. Accessed May 02, 2016, http://nativeamericannetroots.net/diary/1229.

can still be seen throughout the Hopi Reservation. Later, in the 1800s, a great shift of education, government, and culture took place. Across the different Indigenous communities, there were acts of fierce takeovers from the colonizers with the common goal to eradicate the Indigenous people. The Hopi and Tewa people did their best in response to the systematic and institutionalized application of colonial practices (Fig.6) whose primary aim was to destroy the life they had embraced since the beginning. Acts of aggressive behavior, such as warfare, disease, cultural genocide, and relocation, were cloaked by the passive methods of the imposing Western law, policy, regulation, and government authority.

Figure 10. Western influence on Hopi life and culture. Die making.

Source: Milton, Snow. *Die making – heating & cutting a section off an automobile coil spring*. 1944 circa. Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives. http://archive.library.nau.edu/cdm/singleitem/collection/hcpo/id/1339/rec/2.

Missionaries, school teachers, military personnel, and Indian agents terrorized the Hopi and Tewa to forget their "heathen" ways and to adopt a more "civilized" lifestyle. The Hopi and Tewa were told to move down from their mesas if they wanted the luxuries of the American lifestyle. They seduced the people with promises of advanced technology, keeping of their lands, keeping of their children, enlightenment with the adoption of Christianity, wisdom that comes with the English language, and the freedom to govern their own people. However, these assimilationists did not bring an easy time and did not come with noble cause.

Many promises were broken. One such promise was the opening of the Keams Canyon Boarding School in 1887.[14] (Fig.7) There were some Hopi members who wanted the school but there were also others who did not welcome it, which resulted in the families hiding their children. To fill the school, many children were taken from their families without permission. Stories capture how many of the children would hide when the military personnel came for them. Struggles and painful experiences persisted for a long time. The Hopi people finally gained their political voice in the colonized government system in 1936 with the creation of the Hopi Tribal Council and Constitution.[15]

Figure 11. Keams Canyon Boarding School. "The children who attended Keams Canyon School received haircuts, new clothes, took on a *'white'* name, and learned English…The American Baptist Home Missionary Society provided the students with services every morning and religious teachings throughout the week."

Source: Milton, Snow. *Keams Canyon School.* 1944 circa. *Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives.* http://www.navajocountyhistory.org/hopi.asp.

[14] "Hopi Life and Culture," *Navajo County Library District and Member Libraries - Local History and Photo Album*, Accessed October 18, 2017, http://www.navajocountyhistory.org/hopi.asp.
[15] Willard Walker, and Lydia L. Wyckoff, eds., *Hopis, Tewas, and the American road* (Albuquerque, NM: University of New Mexico Press, 1983)

Figure 12. Collage of Hopi connection to culture.

Source: Kachina House, accessed February 15, 2018, https://www.kachinahouse.com/hopischool.
Source: National Park Service, accessed October 5, 2017. https://www.nps.gov/pefo/learn/news/celebrate-national-american-indian-heritage-month-2009.htm.
Source: The Hopi Foundation, accessed February 15,2018. http://www.hopifoundation.org/the-hopi-way

Today, the Hopi and Tewa people continue to be connected to their culture. (Fig.8) The youth still show great interest in the Hopi and Tewa traditional knowledge and practices. The continuance of interest is partially due to the multiple traditional and new art opportunities that the Hopi community continued over the centuries and developed over the recent years. The Hopi and Tewa languages are still spoken fluently among the elders and even among some of the youth. The founding of the Hopi Jr/Sr High School (Fig.9) in 1987 helped with this continuous connection. The high school allowed the children on Hopi to remain close to home and encouraged them to continue the Hopi way of life.

Figure 13. Hopi Jr/Sr High School.

Hopi Music Project, accessed October 5, 2017. https://hopimusic.wordpress.com/2009/03/12/repatriationcollaboration-at-hopi-high/.

Some of the villages now have running water and electricity. Walpi and Oraibi are the two remaining villages that do not have running water and electricity to this day. There are some houses in those villages who use solar panels but having solar panels in the villages is not an aesthetic that the community likes or wants. Residents from First Mesa continue to expand the community that is called Polacca, which rests at the foot of the mesa. Walpi housing, Sipaulovi housing, Winslow housing, and scatter homes are the outcome of addressing the housing need on Hopi. The community *Yawehloo Pahki* (Spider Mound) was created as a result of the Hopi and Navajo land dispute and they are working towards developing that community. Development on Hopi fluctuates, but it is all in hopes to provide more jobs, more housing, and more opportunities to return home after pursuing higher education.

CHAPTER 2. METHODOLOGY

2.1 Methodology

Figure 10. A Hopi research framework approach. Inspired by Nehiyaw epistemology provided by Margaret Kovach

Source: BriAnn Laban

There has been plenty of Indigenous research conducted in the past and present, but it has been under the framework of Western methodology. As an Indigenous researcher doing research on an Indigenous topic, there is difficulty in finding and choosing a method that would best approach Indigenous research topics in a respectable way. When the time comes to conduct research, a young scholar might scramble to learn all the different methods that are available. This is a simple task because Western methodologies have become a stable method of research and are accessible to all who wish to do research.

I have conducted many research projects throughout my academic career and all

the research I have conducted has prepared me to understand the Western methodology. However, preparing to conduct an Indigenous research project has proven to be difficult for the Indigenous scholar because there is no set procedure for Indigenous scholars, like myself, to follow. Western methodologies train the researcher to conform to the deep institutionalized models provided to them. It is true that most Indigenous research has relied on Western methodologies because those systems have already been developed and accepted in academia. However, writers such as Margaret Kovach, author of *Indigenous Methodologies: Characteristics, Conversation, and Contexts,* and Linda Tuhiwai-Smith, author of *Decolonizing Methodologies: Research and Indigenous Peoples,* have voiced that "research" has become a dirty word among Indigenous peoples.

Within the greater Indigenous community, Indigenous research has been defined by the bad memories, the uncomfortable silence, and the grin of mistrust.[16] I have heard numerous stories of the misuse of Indigenous knowledge and the effects that one person's actions have had on the Indigenous community. The two authors mentioned above continue to express that there is a need for an Indigenous methodology framework that can bridge the gap between Indigenous knowledge and the academic world. Therefore, implementing Indigenous methodologies as part of the research framework will help assist in lessening the fears of misuse of Indigenous knowledge and bring to light the Indigenous worldview.

I began my research using Western methodologies of qualitative research method, historical research method, case study research method, and correlational research

[16] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012).

method. I began by obtaining information through historical research method and case study method. The historical data provided insight on the past information on culture, tribal housing, and Indigenous architecture in regard to the Hopi and Tewa tribe. This included the current HUD housing protocols and housing types that are on the Hopi Reservation. The case studies of modern Indigenous architecture, specifically tribal housing, displayed the importance of incorporating culture that, so often, gets overlooked during the standard "Western" design process. The historical research in comparison with the case study findings provided a basis for communicating with the community about the housing issues on the Hopi Reservation. By sharing information about traditional Hopi architecture, modern HUD housing, and alternative Indigenous housing, I gained insight from my community on housing on the Hopi Reservation. However, after analyzing a few interviews, I discovered that the Western methodologies were not going to work for my Indigenous research project. These methods were unable to truly pinpoint the issues in the current tribal housing.

I had to develop a unique research method for this project. The diagram (Fig.10) displays the process which was adapted from Margret Kovach's Indigenous research conceptual framework based on the Plains Cree epistemology. Additional steps were taken during this process when trying to understand Hopi epistemology. Just like Kovach's diagram, there isn't any use of arrows or directional lines because this process doesn't have an obvious path. Typically, the flow of an Indigenous research method is up and down, back and forth, in, out, and around.[17] That is exactly what happened in this

[17] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 2, Kindle edition.

research process.

I started my research through historical and case study methods, but trying to find Indigenous architecture that incorporated culture into the design proved difficult. To add to that challenge, Indigenous architecture is not a subject that is widely studied. Yes, there are resources talking about traditional and vernacular architecture, but they are approaching it from a non-Indigenous perspective. The next step I took was to conduct interviews and, in the beginning, that process went great because I had my questionnaire all prepared. However, I quickly realized that the questionnaire was misguided and failed to gather the Indigenous perspective on housing design. When asked what elements of a house were important to Hopi and Tewa people, the responses the questionnaire gathered were similar to what is already seen in modern layouts of the house: big living room, multiple bedrooms, and modern commodities.

I began to get discouraged but remembered that this was a research topic and method that has not yet been perfected. There were not any guidelines for me to follow but there was my community, my mentors, my Indigenous perspective, and the will to give back that drove me forward. So, I had to decolonize my mind, go back and gather knowledge, allow storytelling to lead the interviews, and find meaning from the knowledge that was given to me. I had to repeat this process several times before I began to understand the importance of an Indigenous methodology.

Indigenous methodology may have driven this research, but Western methods were still used throughout this research for the purpose of credibility. Indigenous methodology is not a well-known method among academia, but it is a growing method among many Indigenous researchers because most of the information we are looking for

is not written, but can be found within the oral traditions that many Indigenous tribes use to pass down knowledge. The struggle among any research is to produce work that would be seen as credible within the larger research community.

Figure 11. Locating Indigenous methodologies in qualitative research.

Source: Kovach, Margaret. 2009. *Indigenous Methodologies: Characteristics, Conversations, and Contexts.* Toronto, ON: University of Toronto Press. Kindle Edition

The Western methods are used today because these methods have been used repetitively among many scholars and, with each use, have further established their credibility. Kovach expresses how using different methods allows for flexibility; however, the "degree to which a research framework identifies and then follows the agreed upon procedures for a specific methodology is an influential factor in determining the credibility of the research."[18] Unfortunately, the current use of oral traditions is not viewed as a credible source within Western methodology. There are slight parallel meanings between Western methodologies and Indigenous methodologies. (Fig.11) It could be argued that oral traditions could fall within the parameters of the qualitative research method by conducting it as an unstructured interview. The conversation the interviewee is giving may be free flowing, but it is still in the direction the interviewer

[18] Kovach, chapter 7.

set. Oral traditions are also free moving, but it is in control of the one telling the story. The interviewer may have started the initial dialogue, but the flow of the conversation is now in control of the storyteller resulting in hours of patient listening from the researcher. Even though there are slight parallel meanings, Indigenous methodology is still independent from other methods. Indigenous methodologies allow the Indigenous worldview to be visible and these results are better achieved by breaking the Western methodology.

Many challenges are faced using Indigenous methodologies because Indigenous research not only has to meet the Western criteria, but it must also meet the Indigenous criteria as well. The Indigenous research and Indigenous researcher are more susceptible to judgment from the Indigenous community itself and receiving criticisms such as "not useful," "not Indigenous," "not friendly," "not just."[19] Therefore, many Indigenous scholars have recognized that in order for Indigenous knowledge to thrive the Indigenous researcher must use both Indigenous methods and published works.[20] Kovach summarizes:

> Researchers wishing to use Indigenous inquiry may use it alongside a Western approach that organizes data differently (e.g., grounded theory, phenomenology), thereby using a mixed-method approach…This involves presenting research in two ways, but given the newness of Indigenous methodologies to the academy, this may be a strategic concession. The point is that if Indigenous methods (e.g.,

[19] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012), 236.
[20] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 1, Kindle edition.

> sharing circles, story, protocol) are being utilized, an Indigenous research framework with a tribal epistemology ought to be recognized, as opposed to assuming that Indigenous methods can be subsumed under a Western way of knowing.[21]

Like I stated above, the standard academic Western methodologies are used throughout this research, but the integration of Indigenous methodologies was critical to the success of this research. Indigenous methodology is built upon many qualities but for this research the key qualities include: phenomenology, oral traditions, situating self, knowledge brokers, and giving back.

2.2 Indigenous Methodology: Using Storytelling as The Main Framework Approach

> Is research a form of knowledge-seeking that is amendable only to quantifiable generalization? If that is the belief, it shuts out the possibility of Indigenous research frameworks where generalizabilities are inconsistent with the epistemic foundation. If research is about learning, so as to enhance the well-being of the earth's inhabitants, then story is research. It provides insight from observations, experience, interactions, and intuitions that assist in developing a theory about phenomenon.[22] – Margaret Kovach

This section will explain and emphasize the importance of storytelling as an Indigenous methodology approach. Stories were used as the main framework and

[21] Kovach, chapter 1.
[22] Ibid., chapter 5.

foundation which worked to support the other methods. A strength of storytelling is that it connects us to everything. It serves as a bridge that connects the past, present, and future generations, and that "connectedness positions individuals in sets of relationships with other people and with the environment."[23] Stories tell the tale of who we are for it goes beyond the Western method and brings forth greater meaning. Linda Tuhiwai-Smith wrote:

> The point about the stories is not that they simply tell a story, or tell a story simply. These new stories contribute to a collective story in which every Indigenous person has a place…The story and the story teller both serve to connect the past with the future, one generation with the other, the land with the people and the people with the story.[24]

Importantly, stories consist of all types of memories and experiences that include happiness, sadness, pain, humor, envy, and creativity. These are themes that tell us of who we are and how we live through our culture. Storytelling is a method used to pass down cultural knowledge in hopes that the receiver, usually the youth, will treasure, protect, and preserve what was passed onto them.

The use of storytelling aids in the research process of identifying what a Hopi home is and how it should reflect the Hopi culture. This is greatly needed because most research portrays Hopi architecture as old, traditional, and static. While modern Hopi housing solutions don't portray Hopi culture at all, thus emphasizing the need for

[23] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012), 247
[24] Smith, 242.

"linking Indigenous epistemologies to story as Indigenous method."[25]

The lack of cultural representation in modern housing shows the lack of communication or poor translation among the people and housing programs. For example, the qualitative approach, which is commonly used to gather information in attempts to improve Indigenous housing, is simply asking what the cultural needs are in a Hopi house. Answers may include east facing door, larger kitchen space, more storage space, a *piki* room/house, and more living/dining space. The proceeding steps are inputting the user's information and the cultural aesthetics, i.e. southwest adobe style, into a "new" design schematic and then defining it as "cultural" design. Is it really representing culture?

The common norm in modern Indigenous housing has now become east-facing door and large kitchen space. These are important cultural aspects but what is lacking is the story. The question, "Why are these types of spaces important to the Hopi and Tewa people?" Storytelling as a research method can help aid the communication and translation gap seen between the architect/housing program and the Indigenous community. Kovach iterates:

> Story as methodology is decolonizing research. Stories of resistance inspire generations about the strength of the culture…the stories, and the content that they carry, must be shared with this appreciation to protect them from exploitation or appropriation. The use of narrative in inquiry means that the researcher must

[25] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 5, Kindle edition

accept the guardianship of bringing oral story into academia…[26]

In summary, upon the agreement of sharing of stories, it then becomes the researcher's responsibility to ensure the voice of the storyteller is accurately represented and the meaning of the story does not portray any misconceptions or bias.

Architecture is constant research. An architect is trained to define, gather, analyze, develop, and improve the well-being of humanity. This exemplifies Kovach's theory stated above that "story as methodology is decolonizing research." Storytelling as a method, not only for Indigenous methodology, but for the architectural approach towards Indigenous architecture is important. During my time in architecture studio, one of our lessons was that an architect is the storyteller. The voice, language, and story of the architect is what brings life to the building. Similar to storytelling in Indigenous methodology, the architect must find creative ways to represent the project when they are unable to voice the story, whether it's their story or a client's story.

The majority of the storytelling process in architecture is combined in several steps of visual representations throughout the design process. Some of these visual representations consist of sketches, conceptual diagrams, models, and renderings. These visual representations aid in portraying the architect's process (voice) and ideas (message) that they want to portray. Storytelling is a valuable tool in Indigenous methodology and, when added to architecture methods, it strengthens and helps create a Hopi housing guideline which will eventually lead in the potential development of a Hopi house prototype.

[26] Kovach, chapter 5.

2.3 Phenomenology: The Use of Culture to Experience the Phenomenon of Place

Using phenomenology as a research approach is not a new concept among Western methodology. Scholars, such as, Martin Heidegger, Gaston Bachelard, Hans-Georg Gadamer, Maurice Merleau-Ponty, and Edmud Husserl are the forefront philosophical experts on phenomenology. They explored the importance of phenomenology and its usage as an approach in the sciences. Indigenous research and architectural research projects often use the works of these individuals to help articulate the Indigenous perspective and architectural perspective of phenomenology, for they are closely related.

Heidegger, author of *Being in Time* and *Building Dwelling Thinking*, claims the theory of phenomenology expands from Being-in-the World (Da-sein) to Building Dwelling (Bauen). Expressing the existential phenomenology that human beings cannot live apart from the universe.[27] Phenomenology experiences describing a home that is told through stories, prayer, songs, poems, etc. gives a greater definition beyond an objective description. It reveals those virtues that attach the inhabitant to what they call home.

Bachelard, author of *The Poetics of Space*, argues that memories and dreams, much like sensorial information, captivate the phenomenological entity that is stored in a home. He mentions that a phenomenologist is not trying to describe a house like an architect would through picturesque features or an historian/archeologist that would

[27] Martin Heidegger, *Being and time: A Translation of Sein und Zeit*, trans. Joan Stambaugh (Albany, NY: State University of New York Press, 1996), 51. http://www.naturalthinker.net/trl/texts/Heidegger,Martin/Heidegger,%20Martin%20-%20Being%20and%20Time/Being%20and%20Time.pdf.

analyze the reasons of why. The phenomenologists are trying to go beyond the scope of description in hopes to attain the primary virtues of attachment.[28]

Hans-Georg Gadamer, author of *Philosophical Hermeneutics*, theorizes that people are firmly fixed with the world that they inhabit and to understand the phenomenon under investigation there needs to be an "anti-objective" understanding in the language, history, epistemology, and cultural traditions.[29] This reveals their worldview.

I agree with all three philosophers for their theories are closely tied to how Indigenous people, specifically Hopi and Tewa people, view life. Part of obtaining cultural knowledge is through the phenomenological experience in the home. These phenomena teach you how to live and behave within the culture. However, with the influences of other cultures in the modern houses these phenomena can easily be passed by. Therefore, Indigenous architecture is one way to bring back those phenomena and strengthen one's cultural knowledge.

One of the architect's goals is to try to design an environment that expresses the user's phenomenological experience of home by telling the user's story through built form. There are several ways that Western architecture has incorporated this concept into built form. A few examples are examining the indoor-outdoor relationship, through ornamentation, and by positive quantifiable data. However, these concepts are lacking the Indigenous perspective. Gadamer's philosophical hermeneutics helped me further explain

[28] Gaston Bachelard, *The Poetics of Space*, trans. Maria Jolas (Boston, MA: Beacon Press, 1964), 4.
[29] David Weberman, "A New Defense of Gadamer's Hermeneutics," *Philosophy and Phenomenological Research* 60, no. 1 (2000), 45, http://www.jstor.org/stable/2653427.

the Indigenous phenomenon within culture and architecture.

In his written work, *Philosophical Hermeneutics*, Gadamer goes into detail with why hermeneutics, the science of interpretation, has produced the alienation of the hermeneutical consciousness, aesthetic consciousness, and historical consciousness. He writes:

> The aesthetic consciousness realizes a possibility that as such we can neither deny nor diminish in its value, namely, that we relate ourselves, either negatively or affirmatively, to the quality of an artistic form. This statement means we are related in such a way that the judgment we make decides in the end regarding the expressive power and validity of what we judge…The historical consciousness has the task of understanding all the witnesses of a past time out of the spirit of that time, of extricating them from the preoccupations of our own present life, and of knowing, without moral smugness, the past as a human phenomenon…(the) hermeneutical consciousness also, our initial task must be to overcome the epistemological truncation by which the traditional "science of hermeneutics" has been absorbed into the idea of modern science.[30]

Gadamer then states that:

> Our task…is to transcend the prejudices that underlie the aesthetic consciousness, the historical consciousness, and the hermeneutical consciousness that has been restricted to a technique for avoiding misunderstandings and to overcome the

[30] Hans-Georg Gadamer, *Philosophical Hermeneutics*, trans. and ed. David E. Linge (Berkley and Los Angeles, CA: University of California Press, 1976), 4-7, http://www.mohamedrabeea.com/books/book1_10584.pdf

alienations present in them all."[31]

Basically, as Indigenous researchers, we must decolonize our minds from the Western framework that we have familiarized ourselves with, in order to express the Indigenous perspective.

2.3.1 Hermeneutic Consciousness: The Importance of an Indigenous Perspective in Research and Architecture

Gadamer elaborates on hermeneutic consciousness by offering Schleiermacher definition of hermeneutics, which is restricted by modern science. Schleiermacher defines it as the art of avoiding misunderstanding by excluding, through controlled systematic application, whatever is alien that could lead to misunderstanding.[32] Gregory Cajete's theory of perceptual phenomenology begins to break the Schleiermacher definitions of hermeneutics. Cajete's theory states that the conceptual framework of Native American science is based upon perceptual phenomenology. Cajete summarizes that Native science includes, but is not limited to, ritual and ceremonial practices, art and architecture, metaphysics and philosophy, practical technologies, astronomy, hunting and agriculture, time and space, and language, which goes beyond Indigenous "knowledge and truth gained from interaction of body, mind, soul, and spirit with all aspects of Nature."[33] This can be viewed as alien in Western knowledge but Native science, specifically in terms of architecture, has always referred to knowledge in different "cultural representations (through) story, art, and ways of community."[34] He further expresses his understanding

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[31] Gadamer, 8.
[32] Ibid., 7.
[33] Gregory Cajete, "Philosophy of Native Science," in *Native Science: Natural Laws of Interdependence* (Santa Fe, N.M.: Clear Light Publishers, 2000), 47.
[34] Cajete, 47-48.

by stating, "The central premise of phenomenology roots the entire tree of knowledge in the soil of direct physical and perceptual experience of the earth. From a phenomenological viewpoint, all sciences are earth-based."[35]

Architecture, in its own way, has explored this phenomenon through built form. Christian Norberg-Schulz summarizes this architectural phenomenon:

> Man dwells when he can orientate himself within and identify himself with an environment, or, in short, when he experiences the environment as meaningful. Dwelling therefore implies something more than 'shelter'...Since ancient times the genius loci, or 'spirit of place,' has been recognized as the concrete reality man has to face and come to terms with in his daily life. Architecture means to visualize the genius loci, and the task of the architect is to create meaningful places, whereby he helps man to dwell.[36]

A solution that is often explored is the concept of the inside-outside relationship between the built environment and the natural environment. Norberg-Schulz brings up Heidegger's definition of boundaries being that it is not in a sense causes something to stop but that it allows something to begin its "presencing."[37] He continues to explain the built space and the landscape are enclosed by the man-made and natural boundaries that make the spatial structure visible, which creates the relationship between natural and man-made places. It is then that the openings such as windows, doors, thresholds help illustrate the connection between inside and outside.

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[35] Ibid., 45.
[36] Christian Norberg-Schulz, *Genius Loci: Towards a Phenomenology of Architecture* (New York: Rizzoli, 1979), 5.
[37] Norberg-Schulz, 13.

Genius loci, "the spirit of place," doesn't completely reflect Indigenous cultural knowledge but it helps begin the dialogue of an Indigenous perspective with the idea of "sense of place." Therefore, Indigenous cultural knowledge can add to the conversation of "dwelling." Land has always been viewed as sacred among Indigenous communities. Several Indigenous scholars are able to express this phenomenon and place its significance in perspective. Examples include:

> Hirini Matunga – "Recognition that the central tenets of Indigenous planning are essentially community/kinship and place-based. It is a form of planning whose roots and traditions are grounded in specific Indigenous peoples' experiences linked to specific place, lands, and resources…To do Indigenous planning requires that it be done in/at the place with the people of that place."[38]
>
> Simon Ortiz – "Land is who we are, land is our identity, land is home place, land is sacred…the land is voice."[39]
>
> Ted Jojola – "The worldview is an embodiment of a balanced relationship between humankind and the natural world. Over time, each succeeding generation assumes the values and the practices that are necessary to sustain them. Values, such as the right-of-inheritance and collective responsibility, serve to lay the foundation for the transfer of meaning and cultural practices."[40]
>
> Leslie Marmon Silko – "Pueblo Potters, the creators of petroglyphs and oral

[38] Hirini Matunga, "Theorizing Indigenous Planning," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013), 31.
[39] Simon Ortiz, Kathleen Manley, and Paul W. Rea, "An Interview with Simon Ortiz," *Journal of the Southwest* 31, no. 3 (Autumn 1989): 362-77, http://www.jstor.org/stable/40169691.
[40] Ted Jojola, "Indigenous Planning: Towards a Seven Generations Model," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013), 457.

narrative, never conceived of removing themselves from the earth and sky…[T]he term landscape, as it has entered the English language, is misleading. 'A portion of territory the eye can comprehend in a single view' does not correctly describe the relationship between the human being and his or her surroundings. This assumes the viewer is somehow *outside* or *separate from* the territory she or he surveys. Viewers are as much a part of the landscape as the boulders they stand on."[41]

Johnpaul Jones – "Native peoples have an extraordinary relationship with the land and the world around them that stems from the broadest sense of kinship with all life. They possess systems of beliefs that are complex yet straightforward, passed down for generations…The land has memory."[42]

Rina Swentzell – "Pueblo people believe that the primary and most important relationship for humans is with the land, the natural environment and the cosmos, which in the Pueblo world are synonymous. Humans exist within the cosmos and are an integral part of the functioning of the earth community. The mystical nature of the land, the earth, is recognized and honored. Direct contact and interaction with the land, the natural environment, is sought. In the pueblo, there are no manipulated outdoor areas that serve to distinguish humans from nature. There are no outdoor areas that attest to human control over 'wild' nature. There are no

[41] Leslie Marmon Silko, *Yellow Woman and a Beauty of the Spirit* (New York, NY: Simon and Schuster, 1996), 27.
[42] Johnpaul Jones, "Introduction: Remembering the Experience of Past Generations," in *The Land Has Memory: Indigenous Knowledge, Native Landscapes, and the National Museum of the American Indian*, ed. Duane Blue Spruce and Tanya Thrasher, (Chapel Hill, NC: University of North Carolina, 2008), 2-4.

areas where nature is domesticated."[43]

This is just a fraction of what many other Indigenous individuals, i.e. Hopi and Tewa, attest to. In summary, utilizing the Indigenous perspective on the relationship with the land can create an improved dialogue for implementing cultural needs into the design of a Hopi home and Indigenous architecture. The lack of spatial patterns that can accommodate the socio-cultural patterns is evident within the current HUD housing, which causes a disconnection between the natural phenomenon of "dwelling" in our universe. Decolonizing the mind, of how hermeneutics is approached in Western methodology, can break the "alien" concept of dwelling. If the Hopi perspective of our relationship to this world is reflected into the design process, this can help illuminate the spatial patterns within the community and home that are needed to create appropriate socio-cultural patterns for the Hopi people.

2.3.2 Aesthetic Consciousness: Brought to Light Through Language and Semiotics

This section examines the aesthetic consciousness of architecture and the aesthetic consciousness of oral tradition. Aesthetic consciousness is always interchangeable within architecture. One possibility, and focal point, of aesthetic consciousness can be represented through semiotics, which are symbols and ornamentation. There are those who view semiotics to be a source of pleasure and meaning. While others see ornamentations or symbols as a waste of resources that express no meaning. Scholars

[43] Rina Swentzell, "Conflicting Landscape Values: The Santa Clara Pueblo and Day School [Vision, Culture and Landscape]," *Place Journal* 7, no. 1 (1990), accessed January 09, 2017, https://placesjournal.org/assets/legacy/pdfs/the-santa-clara-pueblo-and-day-school.pdf.

such as, Antoine Picon, author of *Ornament: The Politics of Architecture and Subjectivity,* lean in favor of ornamentation. Picon discussed the evolution of ornamentation in architecture and how it will never go away as long as the architectural tools and thinking evolve. Picon suggest that "the most powerful architectural symbols are perhaps those engaged in the process of representation."[44] Architects tend to view architecture as objective, in a sense, "buildings never speak;" however, the belief is that the building has the potential to speak "if the proper conditions were met."[45] On the other hand, Adolf Loos, author of the essay "Ornament and Crime," is against ornaments and he believed that architecture was moving towards or has arrived to the simplicity of design. Loos viewed ornamentation as a waste of time, a waste of resources, and no longer connected to culture. He continues to express that the "evolution of culture is synonymous with removal of ornamentation"[46] and that the progression of society is slowed because of those who still like the idea of traditions.

The aesthetic consciousness for Indigenous cultural knowledge can be viewed between oral traditions and written form. Oral tradition, in the Indigenous perspective, is viewed as an essential tool for transferring of knowledge. While Western perspective views written form as the crucial method for transferring of knowledge, as well as "saving" knowledge. Storytelling has the capacity to connect us with each other and the world around us. The listener is able to experience the phenomena that the teller is able to illustrate in his or her story. However, much argument is that oral traditions are not meant

[44] Antoine Picon, *Ornament: The Politics of Architecture and Subjectivity* (Somerset, GB: Wiley, 2013), 149.
[45] Picon, 144.
[46] Adolf Loos, "Ornament and Crime," in *Ornament and Crime: Selected Essays*, trans. Michael Mitchell (Riverside, CA: Ariadne Press, 1998), 167.

to be written down. As Margaret Kovach describes, "In oral tradition, stories can never be decontextualized from the teller. They are active agents within a relational world, pivotal in gaining insight into a phenomenon."[47] This makes it difficult for Indigenous scholars to articulate the knowledge that is given to them in written form, without losing the teller's voice. This challenge can be reflected in architecture as well with the question: how can architecture trigger meaning?

Unfortunately, part of Western methodology is having to write the oral traditions in an academic framework. The challenge is then having to find an innovative way to write down the Indigenous culture without losing "meaning." A solution provided by Kovach is to make visible the holistic rational meaning by having the researcher provide a reflective narrative of the story. This is a good starting point, but the struggle continues with having to decontextualize the knowledge so that it fits within the academic framework. There is so much lost in written translation because when narratives have been transformed into texts there is an implication that the now texted narrative is setting assumptions.[48] Simon J. Ortiz, author of "Song, Poetry, and Language – Expression and Perception," is able to articulate the Indigenous perception of language and that it is greater than how we perceive it today.

> We think of English as a very definitive language, useful in defining things – which means setting limits. But that's not what language is supposed to be. Language is not definition: Language is all expansive. We, thinking ourselves

[47] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 5, Kindle edition.
[48] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 5, Kindle edition.

> capable of the task, assign rules and roles to language unnecessarily. Therefore, we limit our words, our language, and we limit our perception, our understanding, and our knowledge.[49]

The fear of losing meaning when contextualizing a story hides the often-forgotten association that language is story. As Leslie Marmon Silko explains:

> At Laguna Pueblo, for example, many individual words have their own stories. So when one is telling a story and one is using words to tell the story, each word that one is speaking has a story of its own, too. Often, the speakers, or tellers, will go into these word stories, creating an elaborate structure of stories within stories.[50]

Words, or language, then become the supporting tool that helps create a written narrative that reflects the storyteller's voice and their message. This relates to Heidegger's description of phenomenology of place with the use of language. Expanding on the Indigenous concept that language is a part of storytelling. He writes:

> What, then, does Bauen, building, mean? The Old English and High German word for building, buan, means to dwell. This signifies: to remain, to stay in a place…Now to be sure the old word buan not only tells us that bauen, to build, is really to dwell; it also gives us a clue as to how we have to think about the dwelling it signifies…Where the word bauen still speaks in its original sense it also says how far the nature of dwelling reaches. That is, bauen, buan. bhu, beo are our word bin in the versions: ich bin, I am, du bist, you are, the imperative

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[49] Simon Ortiz, "Song, Poetry, and Language – Expression and Perception," in *Genocide of the Mind: New Native American Writing*, ed. Moore, MariJo (New York: Nation Books, 2003), 405.
[50] Leslie Marmon Silko, *Yellow Woman and a Beauty of the Spirit* (New York, NY: Simon and Schuster, 1996), 50.

> form bis, be. What then does ich bin mean? The old word bauen, to which the bin belongs, answers: ich bin, du bist mean: I dwell, you dwell. The way in which you are and I am, the manner in which we humans are on the earth, is Buan, dwelling. To be a human being means to be on the earth as a mortal. It means to dwell. The old word bauen, which says that man is insofar as he dwells, this word barren however also means at the same time to cherish and protect, to preserve and care for…[51]

If language is story because the use of language helps with the process of translating oral into written form. Then language becomes a part of semiotics as well for semiotics is the art form of expressing stories. Language is capable of connecting us to the universe that we dwell in but it is also capable of disconnecting us from our worldview. Architecture is the hopeful tool that can be the bridge between spoken and written/visual form. Again, aesthetic consciousness sits on opposite ends of the spectrum. One side accepts ornamentation while the other denies it. However, the Indigenous perspective on symbolism goes beyond the typical representation of 2D and 3D objective visuals. With the help of language, symbolism can transcend into the 3D and 4D phenomenon. The combination of language and semiotics in the Indigenous perspective adds to the discussion of ornamentation and language expressed through Western methodology. The addition of the Indigenous perspective on ornamentation and language can help better define the meaning of the Hopi home and Indigenous architecture.

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[51] Martin Heidegger, "Building, dwelling, thinking," in *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper Colophon, 1971), 2. http://www.arch.mcgill.ca/prof/luka/urbandesignhousing/temp/other/misc_refs/Heidegger1971.pdf.

2.3.3 Historical Consciousness: Every Story Matters!

Indigenous methodology embraces oral traditions for they evoke the memories and experiences of being Indigenous, which integrates identity and sense of place into the research. Kovach mentions that, "in listening to the research stories of others, it is evident that research stories reveal the deep purpose of our inquiries."[52] Those inquiries are illuminated because the stories allow us to find our sense of place within the place we inhabit and develops our identity with the spiritual relationship we have with our culture. Gail Donna-Sacco also mentions that the use of phenomenological research methodology relies on narrative to reflect Indigenous knowledge and that narrative can culturally inform appropriate strategies towards the human well-being.[53] Historical consciousness is connected to oral traditions for it carries multiple meanings reflected through good and bad stories. All types of oral tradition are important in revealing clues on how to begin to assist in the progression of the community.

Bachelard's theory states that memories or, in my interpretation, stories provoke phenomenological entities. However, his process of memory choosing is limited only to the good memories. He writes, "Memories of the outside world will never have the same tonality as those of home and, by recalling these memories, we add to our store of dreams."[54] Memories are needed and, when properly used, can aid in the process of creating a home. Through storytelling, many of the interviewees would recall a good memory when they were in their home and that good memory helped shape their

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[52] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 5, Kindle edition.
[53] Gail Dana-Sacco, "The Indigenous Researcher as Individual and Collective: Building a Research Practice Ethic within the Context of Indigenous Languages," *The American Indian Quarterly* 34, no.1 (Winter 2010): 73-74, doi: 10.1353/aiq.0.0094.
[54] Gaston Bachelard, *The Poetics of Space*, trans. Maria Jolas (Boston, MA: Beacon Press, 1964), 6.

definition of home. However, there are distinct types of phenomenological experience and each carries a different level of personal experience. Remembering the golden times is essential but it is often idealized when provoking memory. What usually goes dismissed are the bad memories associated with the home. This is understandable because no one enjoys recalling bad memories, for it can cause too much pain to handle. However, the remembering of painful moments bares the reasoning of why there needs to be improvement. Linda Tuhiwai-Smith iterates:

> The remembering of a people relates not so much to an idealized remembering of a golden past but more specifically to the remembering of a painful past, re-membering in terms of connecting bodies with place and experience, and, importantly, people's responses to that pain.[55]

In a sense, historical consciousness is linked through remembering those memories that provoke trauma. This includes separation, violence, abandonment, relocation, and substance abuse. It is important to note that these types of memories can take a toll on individuals and by no account should these memories be provoked, even for the sake of research. However, if these memories emerged on their own then it is important to acknowledge it and not dismiss it. I reveal this information because it is an important aspect within Indigenous methodology that can often go dismissed within Western methodology. The emergence of bad memories can cause an uncomfortable setting; however, it is important to note that if a participant did bring up a traumatic memory on their own accord, this exhibits the trust and respect they have for the researcher to have

[55] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012), 243-244.

and hold that story. Therefore, it is important for the researcher to listen and not to dismiss or avoid their story. This type of memory aids in the crucial strategy of developing a Hopi housing guideline, or in any Indigenous approach, that looks to heal and transform a community.

Of course, not all bad memories are at the level of traumatic memories. It can be at a level that associates memories with the times when there was no running water, no electricity, or poor insulation. These types of phenomena are more often shared when discussing the improvement of housing on the Reservation. These types of memories are just as important in the improvement of understanding, defining, and fixing Indigenous architecture. Nonetheless, if the moment arises when a deeper memory of trauma is shared, I like to reiterate that it is up to the participant to share such stories and, if shared, it is important that the researcher give space for and respects those stories. There is always something more within the story than the verbal illustration reveals. It is up to the researcher to find meaning in it because once that is established then the process of creating a Hopi housing guideline strengthens.

2.4 Storytelling: An Indigenous Way of Interviewing

"Storytelling, oral traditions, the perspective of elders and
of women have become an integral part of all Indigenous
research." – Linda Tuhiwai-Smith[56]

I used interviewing as a method for gathering stories. Initially, I started the

[56] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012).

interview process with the intent of gathering the facts, similar to how an architect would gather information through a design charrette. I initially thought that these facts would be the leading inspiration in the design of an alternative housing type. Following the qualitative interview process, I did gain some information of the needs and wants that the community would like to see within a Hopi house design. More importantly, while conducting interviews with participants, it became clear to me that the interview process wasn't something I would have control over. The methods of storytelling and interviews are similar but an interview gives more power to the researcher whereas storytelling gives more power to the participant. Kovach summarizes:

> The power lies with the research participant, the storyteller. This would doubtless frustrate those interested in a 'just the facts' approach. However, for those who value story as knowledge, this method allows for a breadth of knowing to enter into the research conversation that the researcher alone may not have considered.[57]

Fortunately, this mindset is parallel to an architect's main inspiration tool which is listening to the client's needs and wants. Similarly, an Indigenous way of gathering knowledge is through oral traditions. It is obvious that my main knowledge-seeking method would be through the process of listening to people's stories.

Part of the process was trying to find a way to get the stories going after my research explanation. There were two method approaches that surfaced throughout this process. The first one was based on the qualitative interview method of obtaining

[57] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 7, Kindle edition.

information based on the interview questions that were developed before any interviews were conducted. The other was simply allowing the participant to take over the interview process. To show the greatest amount of respect to the participant's story is to have an open-structured conversation that allows the participant greatest amount of control during the interview process.[58] Trust is the foundation between the researcher and the participant. Without it, the story will never surface.

I began with the standard explanation of my project and goals that I would like to reach throughout my research process. Then I would summarize the questions that I developed based on what I thought was important in my research. Many of the participants would nod and agree with my research questions though not giving an elaborate response. This is a custom that allows the listener to provide a respectable response without interrupting the speaker. It wasn't until I was finish speaking that the participant spoke. For the first few interviews I conducted I used the prepared questions to guide the interview process. Unfortunately, that process wasn't working very well. Therefore, I allowed the participants to respond in accordance to what they heard me say, rather than having them respond to what I ask.

The interviews often resulted in three outcomes: (1) The participant got lost in thought and looked towards me for guidance, so I would respond with another guided question; (2) The participant would ask me a question and my response would initiate the participant's storytelling process; or (3) The participant offered and completed their story then I would use my questionnaire to help begin the next story.

[58] Kovach, chapter 7.

I tried using the framework of a structured interview process to stay within a 20-30-minute timeframe. Unfortunately, no matter how hard I tried to stay on track with the interviews, it wouldn't go in accordance to a standard and timely interview process. Most of the participants, especially the elders, were carefree and seemed to enjoy telling their stories without the strain of a timeframe or guidance of questions. Kovach mentions Robina Thomas's reflection on how organic the flow of story is, "The beauty of storytelling is that it allows storytellers to use their voices and tell their own stories on their own terms."[59] I was placed within the hands of the participants. Their stories weren't told in minutes, but in hours. Within those hours, I wasn't only listening but I was also participating or assisting them in everyday activities. During one interview, I helped tie chili together while we shared our stories. During another interview, I was taken to the participant's house and we walked around it while exchanging stories. In some of the recordings, you can hear chewing and clinging of utensils because we were eating. Since sharing of stories isn't viewed as a strict interview process, it can be done anywhere and anytime. This process permits the interviewee to control the conversation and provide additional knowledge that the researcher hadn't considered.

Overall, this method of storytelling may appear too organic for a Western methodology. The ability to analyze the story and portray data in an organized fashion is too difficult in a Western method. I want to note that it wasn't always difficult because, within some of the interviews, there were some stories that answered some of the questions in a qualitative format. However, as I sat there listening and participating, I became aware that they were giving me much more than what I initially thought. They

[59] Ibid.

gave me knowledge that I hadn't considered at the time when I was creating my questions. Similar to the architecture process of analyzing and finding meaning of a client's design dreams, the Indigenous researcher must also find meaning within the stories. Being trained as an architect helped me develop the ability to manage this process and find meaning within the interviews. With this ability, the Indigenous researcher in me was able to define what a Hopi Home is and what culture means for the Hopi people, ultimately leading me to developing a guideline.

2.5 Self-Locating, Knowledge Brokers, Giving Back: Essential Elements of Indigenous Methodology

One of the major factors of successful Indigenous methodology is having a strong connection to the community you are researching. Linda Tuhiwai-Smith mentions that an insider researcher, or Indigenous researcher, must perform the same as an outsider researcher but there are three major differences: (1) the insider researcher must build a research-based support system that connects with the community; (2) they must be skilled with the ability to say "no" or "continue;" and (3) they must live with the consequences beyond the completed research.[60]

The first section, "Self-Locating," addresses the first difference by discussing how pre-existing connections can either aid the development of the research or cause blocks throughout the process. By self-locating, this can help develop a different type of connection and support from the community beyond the already established familiar connection. Self-locating in text is also discussed and the importance of using first person

[60] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012), 231.

narrative aids in the process of self-locating. The next section addresses the second difference by briefly discussing the idea of holistic epistemology within Indigenous research methods, which provokes the idea and need of "Knowledge Brokers." That the idea of Knowledge Brokers aid in determining what is appropriate to research and what isn't. Finally, the third section, "Giving Back," will discuss the greater responsibility felt among Indigenous researchers to give back and the consequences that they face compared to their non-Indigenous counterparts.

2.5.1 Self-Locating: Connecting to the Tribe and Retaining the Voice

Being a part of the Hopi and Tewa community, I already had pre-existing relationships with some of the participants, while the rest of the participants either knew of me through my parents or grandparents. Upon meeting them, they were happy to assist me in this endeavor despite the fact they didn't know about my research topic or my end goal. They have already given me their trust which I am grateful to receive. However, as Linda mentions, I had to create a research-based relationship with the community. Having a pre-existing relationship was great for it helped me gather a lot of opportunity for interviews, but this can also be detrimental to my research because I am either viewed as the expert or as the person who knows nothing. Kovach mentions the root to Indigenous methodology is that the researcher's self-location gives the participants the opportunity to evaluate and understand the researcher's motivations for the research.[61] This allows the participants to see who I am and why I have chosen this research project.

[61] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 5, Kindle edition.

At the beginning of this research project, I was ignorant to the idea and importance of self-locating. My initial thoughts were that because I was from the Hopi community, I didn't need to self-locate. I grew up on the Hopi Reservation therefore, I thought there would be an automatic understanding between the community and I about the Hopi housing issues and solutions. I first developed my interview process based on Western methodology by stating what my research project is, its purpose, followed by questionnaires. This method isn't bad and some of the participants preferred the chronological order of the questions. This helped them think of their response and the starting point to tell their story. However, I discovered a small issue in this process: by not self-locating, my participants weren't confident in their responses. I found they were more than willing to help with my project but were uncertain as to my goals so they were hesitant with their responses.

The Western concept of the interview process is designed to gain facts that can easily be put on spreadsheets or diagram. My first attempt in using the Western methodology resulted in me receiving emotionless answers. They would pause and ask if their answer was correct, if it was the answer I was looking for, or question the reasoning behind my question. I would respond by reassuring them that their story or answer was perfect and then I would proceed by providing my own story and connection to the project. Sharing my connection to the project was a retrospectively self-locating. Through these discussions my motivation for this research allowed for a deeper research-based connection between the participants and myself.

The delayed understanding of the project could have been avoided if I had situated myself within my research at the very beginning. This self-locating method took

a while to develop throughout my interview process. I started by creating a script for me to follow in the beginning of the interviews so that I wouldn't forget to mention essential elements of my research. I used the script a few times, but I rehearsed it so much that my own personal voice and passion began to fade from the words. However, rehearsing that script over and over again allowed me to memorize the essential elements. Without the fear of forgetting any important materials of my research, I was then able to self-locate by sharing my story and my voice in the beginning of the interview. This resulted in the participant responding in an organic storytelling way.

It is also important to self-locate within the written portion of research. The process of doing so is by sharing one's own stories and understanding of the research. This can be difficult because in order to self-locate in a written version, the writer must present their story in first person. There is a lot of debate as to whether or not this is appropriate in a research paper because "research is highly institutionalized through disciplines and fields of knowledge, through communities and interest groups of scholars, and through the academy."[62] As we know, the institutionalized research mindset is for the purpose of observing with little to no interference of the researcher. However, under Indigenous methodology writing in first person is important because the goal that Indigenous methodology is trying to obtain is to not only state facts but to provide the Indigenous perspective that is so often omitted from written text. This helps build a harmonious synergy with the reader in hopes that they understand the Indigenous perspective. This can be obtained by placing one's voice and story, self-locating, into the

[62] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012), 213.

document.

Offering one's voice within the research is a vital component in Indigenous methodology. Throughout this project, I am hoping to retain my voice, but the concern is that Western methodology will cause my voice to be lost. The Western education system has institutionalized our way of thinking. "Our Western education precludes us from writing or speaking from a 'real' and authentic Indigenous position."[63] The truth is that we are all trained to think alike and are trained to see written texts in the same manner so that we can be placed on the same level. Self-locating in one's written document by incorporating stories in first person doesn't delegitimizes the document. Instead it provides the Indigenous voice that is so severely lacking in academia. This method can be seen within many books including *First Person, First Peoples* edited by Andrew Garrod & Collen Larimore; *Genocide of the Mind* edited by MariJo Moore; *Yellow Woman and a Beauty of the Spirit* by Leslie Marmon Silko; and in Linda Tuhiwai-Smith's *Decolonizing Methodologies*.

These authors' choice of language and narrative form helps create a connection between the reader and the writer. Using personal stories to help narrate an idea provides a link that helps the reader connect to that idea by sparking the reader's memory that they can possibly relate to, more so for Indigenous readers. Similar to oral traditions, the tone and body language that the storyteller uses helps them to engage with the listener. That interaction is one of the goals that Indigenous methodology strives to achieve in written form. Self-locating helps with reaching that goal of connecting the reader to the writer.

[63] Smith, 50.

2.5.2 Knowledge Brokers: The Responsibility of a Knowledge Broker

Linda Tuhiwai-Smith mentions that there are two types of researchers: those who are outsiders and those who are insiders. Each type of researcher has differences embedded in their role. Among those difference she mentions that the insider researcher must be skilled with the ability to say "no" or "continue." It is true that with most research methodologies the assumption is that most researchers have an outsider's perspective because most research requires the researcher to observe and not be part of the scene so that the data collected isn't altered with intrusion. However, for Indigenous research, the insider needs to be a part of the scene, not in a direct sense that they begin to cause changes, but in an interaction so that they can understand the information that is given to them. This interaction can be obtained with the help of Knowledge Brokers who make sure that the data collected is used appropriately and not devalued.

One challenge with this research is to gain a perspective of housing on the Hopi Reservation that isn't portrayed from a Western worldview. Most resources paint Indigenous architecture as primitive, historic, static, inferior, and a way to "save" culture. On the other hand, the Indigenous view on architecture isn't written in text. Instead the perspective on Indigenous architecture is told through stories. These stories are shared beyond the historical and qualitative facts. There is much information about Hopi housing architecture in stories, but some information provided is difficult to understand and some knowledge is restricted to the community only. This causes tension between the researcher and the community. In the past, there has been plenty of research conducted but the results of said research exploited the Hopi culture. Knowledge Brokers is a method that can help decrease that tension.

The concept of Knowledge Brokers is a new terminology within Indigenous methodology. The term Knowledge Brokers:

> Refers to the locals who act as bridges between formal and informal institutions and networks. These agents have a keen perception of place. Their knowledge is viewed as parallel to the external, or expert, perspectives. In architecture, this is fulfilled by Elders and/or Cultural Advisors. These brokers are our closest allies in architecture, carrying with them the ability to access latent materiality and memory. Brokers bring a high context way of life into an operational format.[64]

Knowledge Brokers are community members who act as a possible cultural advisor throughout the research process. They help by providing a guideline to what is appropriate to study and share within an Indigenous and Western context. They are the bridge between academia and Indigenous knowledge. Using Knowledge Brokers in an Indigenous research project will contribute to the credibility and help retain the community's voice.

Community cultural advisors are one aspect of Knowledge Brokers. The other is that the Indigenous scholars who are conducting the research need to serve as Knowledge Brokers as well. Gail Dana-Sacco explains:

> Many in the name of research have exploited the richness of our shared experience. The stories that have been gifted to me become my responsibility…As Indigenous researchers we must make deliberate and selective choices about the conduct of research in our community and the dissemination of

[64] Wanda Dalla Costa, "Contextualize Metrics + Narrating Binaries: Defining Place and Process in Indigenous North America," (paper presented at the Cross-America: Probing Disglobal Networks, 2016), 2.

information that is collective intellectual property.[65]

Dana-Sacco brings forward the discussion of thoughtful disclosure which provokes the question: what is the difference between thoughtful disclosure and translation? Thoughtful disclosure is being deliberate in what is given and what is withheld. Thoughtful disclosure is showing more respect to the tribal knowledge and beliefs. There is purposeful intention for every knowledge that is given and sometimes the knowledge is just for the receiver. The receiver must understand this responsible and decide whether to say "no" and stop recording or omit the information from being a part of the written result or to say "continue" and find a method that shares the given knowledge in a respectable and accurate way.

I conducted an interview that expressed thoughtful disclosure from the participant's perspective. While we were sharing knowledge, we came upon a story that provided me more insight to the Hopi culture. This knowledge is important in developing a Hopi design guideline, but I was directly told that this knowledge is for me and for the Hopi and Tewa people only. Respecting her wishes that is the only information I will disclose. Whereas translation can be viewed as trying to fit an English word to describe a Hopi context. An English translation is forcibly trying to explain an unrecognizable value without regards to loss of meaning. Another explanation for translation can be that the researcher decontextualizes the information, only providing data that will help with the research, to the maximum point before the Indigenous value is lost. This leads to the researchers becoming the Knowledge Brokers too because the knowledge that is shared

[65] Gail Dana-Sacco, "The Indigenous Researcher as Individual and Collective: Building a Research Practice Ethic within the Context of Indigenous Languages," *The American Indian Quarterly* 34, no.1 (Winter 2010): 73-74, doi: 10.1353/aiq.0.0094.

with them needs to be handled responsibly. The researcher then becomes one of the individuals who is responsible for the tribal knowledge.

2.5.3 Giving Back: Greater Consequences Among Indigenous Researchers

Challenges are faced while conducting an Indigenous research project among Indigenous and non-Indigenous researchers alike. However, the non-Indigenous researcher is often detached from the responsibility of giving back since they are not inherently a part of the community they are researching. Going back to Linda Tuhiwai-Smith's statement about the insider/outsider model displays different problems for the Indigenous researcher. For instance, they must live with the consequences beyond the completed research. Many times, Indigenous research has been conducted and many times that research has not come back to the community that has been researched, resulting in little to no improvement to the community's well-being. I have received much help from my academic advisors, colleagues, and fellow classmates but the most guidance came from my community. They gave me a lot of knowledge about the Hopi culture, Hopi architecture, and so much more. It would be disrespectful to not consider giving back to the community for they are the ones who helped with bringing life to this dissertation.

Most dissertation research that is conducted in the institution usually begins in a classroom and ends in the school's library. It is written and then gets placed on the shelf among the mass collection of thesis topics. During one of the sessions for my Hawaiian studies course, we went to visit the Hamilton Library at the University of Hawaii at Manoa. The class was given a tour of the Hawaii and Pacific Collection, which was

closed to public view. As we ventured into the unknown space, many of us would find an interesting thesis that we felt would benefit our research. I too found some interesting resources about Hawaiian architecture that could have aided in my knowledge gathering process. It would seem simple to find these resources within the database but without using the right keywords those resources will be missed and forgotten over time. However, for Indigenous research and methodology, these theses and the end results of the research are not merely for the sake of the researcher or the institution. Ultimately, this research is conducted for the betterment of the Indigenous community.

Kovach discusses how giving back is what needs to be considers within the framework of Indigenous methodology. Kovach summarizes:

> For Indigenous researchers, there are often three audiences with whom we engage for transferring the knowledge of our research: (a) findings from Indigenous research must makes sense to the general Indigenous community; (b) schema for arriving at our findings must be clearly articulated to the non-Indigenous academy; and (c) both the means for arriving at the findings and the findings themselves must resonate with other Indigenous researchers who are in the best position to evaluate our research. We can choose to disengage from either of these communities, but if we enter into academia we must traverse these different worlds.[66]

Articulating to the non-Indigenous academy and providing findings for future Indigenous researchers to develop follows the same goal as Western methodology. Research is

[66] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 7, Kindle edition.

conducted to provide the opportunity for future research. Therefore, these two groups are already addressed. The important element that makes Indigenous methodology different is the conscious effort to provide the Indigenous research in a form that the Indigenous community can understand and use to improve their knowledge. Simply put, Indigenous methodology advocates for the idea of reciprocity.

Dana-Sacco illuminates the importance of reciprocity within Indigenous methodologies and that it's a concept that needs to be embraced. Giving back is what makes Indigenous research Indigenous. Sharing knowledge is a long-term commitment within Indigenous research because one of the task for Indigenous researchers is to report back to the community of their end findings.[67] It isn't for the sake of the researcher, but it is for the sake of the community's voice. The research results will be going back to the Hopi community but the concept of giving back involves much more than the final product.

Giving back is a terminology that insinuates that giving back occurs only at the end of the research. Giving back is an action that occurs throughout the research process and this can be seen as involving the community beyond the collection of knowledge. Collecting their knowledge is an important aspect, but actively involving the community makes the research project belong to them. I know the Hopi community have many questions themselves that go unanswered and this research project gives them an equal opportunity to ask questions that I may not have considered because I may not have experienced what others have. Therefore, requiring the active involvement of the

[67] Linda Tuhiwai-Smith, *Decolonizing Methodologies: Research and Indigenous Peoples*, 2nd ed. (London: Zed Books, 2012), 53.

community would be having the community involved in the process a lot more than just acquiring knowledge from them in the form of interviews.

Typically, before any interviews are conducted, the institution requires researchers to apply for Institutional Review Board (IRB) approval. This is a standard procedure that many scholars are aware of if their research involves human interaction. The IRB is set to protect the rights of all participants and the information they provide. This is a comforting fact for many participants, especially for Indigenous communities who know too well the disrespect and mistrust that comes with research. A part of my research process was not only acquiring IRB approval, which would have been sufficient, but also acquiring Hopi Cultural Preservation Office (HCPO) approval, my cultural advisor's approval, and Hopi Tutskwa Permaculture Institute (HTPI) approval. This was an extra milestone that I didn't have to take, especially since I am a part of the Hop and Tewa community. I already gained approval from my community based on the fact that I have gone farther than most in the academic field, the information researched is aimed to help the community, and the information researched is by a Hopi/Tewa member. The purpose of acquiring their approval was not only to protect the Hopi Tribe from harmful misrepresentation, but to also practice the concept of giving back throughout the process.

Giving back to the community is an important element within Indigenous methodology but a part of this section is to also mention the consequences that many Indigenous researchers may face while attempting to do research for Indigenous communities. As an Indigenous researcher, I have found that there are risks that will be faced by trying to give back to the community which helped shed light on the consequences. I struggled as I wrote this dissertation because the ones who I am looking

for approval from aren't in the academic world. I am seeking approval from my community. The risk with that is being discouraged if the community doesn't approve. The fear of discouragement and unacceptance can cause the research endeavor to be abandoned by Indigenous researchers. However, the consequence of that is having to face text written only by non-Indigenous "experts." This isn't entirely negative because any work done on Indigenous people is an effort in trying to see into the Indigenous worldviews. But, many attempts have shown that through non-Indigenous researchers text the Indigenous voice is still missing or silenced in the process, intentional or not. This also results in works that either fail to return to the community or the developed solution doesn't really help improve the issues addressed. One must remove themselves from the institution that shaped their way of thinking in order to make meaning of the knowledge given to them and produce solutions from an Indigenous perspective. That is a difficult journey for many Indigenous researchers, but if they do not choose to take on this task the consequence will be that the evolution of Indigenous methodology will cease.

As mention before, the use of Indigenous knowledge in research is frowned upon because history shows the countless times Indigenous knowledge was forcefully acquired and misused for the benefit of the researcher. For example, many of the books about Hopi was not written by a Hopi. The knowledge in those books are passed down through oral traditions and is privileged knowledge but those researchers took it upon themselves to record what they thought was "vanishing culture". There are stories among the Hopi people of those researchers and their methods of acquiring Hopi knowledge. Their actions help create HCPO and similar programs among the various Tribal communities.

Part of the Indigenous methodology is to determine what knowledge can be used and what shouldn't be used. With the help of programs like HCPO and cultural advisors, this lessens the risk of misusing any Indigenous knowledge. However, there are moments when the researcher has to decide for themselves when and how Indigenous knowledge is used within their research.

Decontextualizing sensitive knowledge can aid the researcher but the risk is that censorship can undermine the Indigenous context, which may cause the community to disagree with the idea and cause residual misgiving.[68] The consequence of misusing or misinterpreting Indigenous knowledge can be felt among Indigenous researchers because they must live with that mistake beyond the end of the research since they are from or connected in some way to the Indigenous community. While the non-Indigenous researcher can easily detach themselves from the research after it is complete.

These two consequences go hand in hand and they help put in perspective the importance of pursuing Indigenous research. I endured so much struggle through this process because of the lack of the Hopi voice in resources talking about Hopi architecture and Indigenous architecture. My struggle extended into conducting the interviews and the process that evolved out of trial and error. I also struggled to articulate Hopi culture in written and architectural forms. Yes, it is challenging to research and write about my Hopi and Tewa community. However, the consequence of not pursuing this endeavor leaves the opportunity for no one to ever research Hopi architecture in an Indigenous

[68] Gail Dana-Sacco, "The Indigenous Researcher as Individual and Collective: Building a Research Practice Ethic within the Context of Indigenous Languages," *The American Indian Quarterly* 34, no.1 (Winter 2010): 75, doi: 10.1353/aiq.0.0094.

perspective or someone researching Hopi architecture in a non-Indigenous perspective. My insider researcher status helps to combat both outcomes.

CHAPTER 3. HOPI ARCHITECTURE HISTORY

3.1 Architecture Types on the Hopi Reservation

The Hopi Reservation is located in northeastern Arizona. A continuous practice of Hopi architecture can be seen in the 12 villages: Tewa, Sichomovi, Walpi, Shongopovi, Mishongovi, Sipaulovi, Kykotsmovi, Oraibi, Bacavi, Hotevilla, and upper and lower Moencopi. It is important to know the history of housing on the Hopi Reservation for it can tell us the stories of how things transformed from ancient architecture to modern day tribal housing. In a sense, this history shares the story of the house's spirit. The entire basis for architecture has changed over the course of 217 years as a result of colonization., beginning in the 1800s. It wasn't until the 1960s when the most drastic changes occurred. Today, throughout the Reservation you can see several housing types that range from mobile trailers, rental housing units, G-sheds, HUD housing, custom homes, and the traditional houses that sit on top the Hopi mesas. Despite all the possible options of house types and different systems of acquiring a house, there is still a high percentage of houseless-ness which leads to overcrowded-ness and poor housing quality. Just over 40 percent of Native Americans fall below the federal standard for adequate housing, while only six percent of the U.S. fall below that line.[69] (Fig.12) The Housing Assistance Council noted:

> Household crowding in rural

Figure 12. Adequate housing statistics between American Indian Reservations and the U.S.

Source: Red Feather Development Group, "Why We Do What We Do," Red Feather video, 1:18, posted by Red Feather Development Group, accessed September 12, 2017, http://www.redfeather.org/.

[69] Red Feather Development Group, "Why We Do What We Do," Red Feather video, 1:18, posted by Red Feather Development Group, accessed September 12, 2017, http://www.redfeather.org/.

> areas, such as most Native American communities, tended to be invisible, with households moving in with relatives or friends in reaction to adverse economic or social conditions or to escape substandard housing conditions. HUD officials noted that such 'doubling up' and subsequent overcrowding in Native American communities was often tied to a tradition of extended family dwellings and made it difficult to quantify homelessness in Native American communities.[70]

It is true that the Hopi Tribe, as well as many other tribal communities, have a strong family network and will help provide for their families and friends if they need help. They will always have a house to go to, but the need and want of a house is still high and there are still plenty of obstacles to overcome before the housing shortage is solved. One solution that some Hopi members take is using their own time and resources to build their

Figure 13. Statistics provided by Hopi Tutskwa Permaculture Institute.

- 2,531 square miles or approximately 1.5 million acres
- 18,321 enrolled tribal members with 8,284 tribal members living on the reservation
- The median household income is $13,000 with unemployment rates at 70%
- More than 40% of tribal homes are considered overcrowded to severely overcrowded.
- 28% of homes lack complete indoor plumbing
- The most pressing home repairs are damaged windows, doors and roofs.

Source: Hopi Reservation map. Digital image. *Hopi.* Accessed October 5, 2017. http://www.crystalinks.com/hopi.html.

[70] United States Government Accountability Office, "Native American Housing: Additional Actions Needed to Better Support Tribal Efforts," GAO-14-255 (Washington, D.C.: GAO, 2014), accessed September 12, 2017, http://www.gao.gov/products/GAO-14-255.

own house. This is the one solution that gives the people total freedom and design input. However, this is limited to those who have economic means and skills to construct their own house. Not many people have the resources or background to build their own house; therefore, several organizations were created to assist them in the process of acquiring a house. With Hopi Tribal Housing Authority (HTHA) being the longest functional housing program on the Hopi Reservation, they have faced many housing obstacles and are still trying their best to overcome them. Organizations like Red Feather and Hopi Tutskwa Permaculture Institute are providing their services to aid the HTHA in solving the housing shortage with their straw bale houses and natural build motto. In addition, they are trying to reconnect the Hopi people back to their homes with the attempt to implement culture into their design and construction process. When all three organizations are unable to provide their services, then businesses such as Clayton Homes, who sell manufactured homes, Graceland Portable buildings, also known as G-sheds, and now the discussion of tiny homes has started to begin, to try to assess in the housing epidemic. These different businesses are well-intended with the assistance they provide; however, they do not always consider cultural representation in their models that many Hopi people are asking for now.

On the Hopi Reservation there are many different options to acquire a house but, unfortunately, none of them properly reflect the cultural connection to a Hopi home. They offer basic shelter means, but the Hopi people are still deeply connected with their culture. As long as the house fails to address the cultural needs of the Hopi people then that connection gets weaker and weaker with each passing generation. It is my hope that this dissertation is a significant step in the process of learning and discussing the

historical transformation of architectural types that were and are seen on the Hopi Reservation, and will help illuminate the trail that needs to be created in order to develop a new Hopi housing guideline that adequately incorporates cultural learning and needs.

3.1.1 Hopi Traditional Architecture

Figure 14. Chaco Canyon.

Source: "Chaco Canyon," Digital image. *Albuquerque Journal*. Accessed January 14, 2017. https://www.abqjournal.com/606278/archaeologists-call-on-feds-to-protect-chaco-canyon-area.html.

Figure 15. Walpi Village.

Source: "Walpi." 1920 circa. *Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives.* http://archive.library.nau.edu/cdm/singleitem/collection/cpa/id/99026/rec/1.

Hopi ancestors can be traced back to various locations such as Mesa Verde, Chaco Canyon, *Wupatki*, Aztec Ruin, and many other locations. Before the influence of Western architectural practices, earthen materials were used to construct all types of architecture in the southwest. Today in the southwest, many ancestral architecture structures remain partially standing. This is a testament to the architectural knowledge that the ancient ones carried and passed down to the present generations. One of the iconic traditional architectural precedents lie within Chaco Canyon. (Fig.14) These earthen structures have proven to have the ability to last throughout great expanses of time. The ability that this material can last through time is commended to the knowledge that the Anasazi's possessed when it came to design, planning, and constructing their

architecture. They understood the connection and benefits that earth and the environment had to offer. However, constructing and maintaining these earthen structures must have been difficult because the National Park Service, today, seems to extend extensive efforts in order to preserve and maintain these structures. The constant presence of the elements and the tourist interaction with the structures can wear the material down. Deterioration of these ancient structures is not as fast as wood material, but it is ever present. The maintenance requirements in the old times may have been high, but it didn't stop the ancient ones from building with earthen materials. This may have been because it was the only available material at the time, but also, they held a deeper knowledge and connection to the earth and the cosmos. This knowledge and respect for earth and the cosmos was passed down to the decedents of these ancient people, which include the Hopi, and this knowledge can be seen in their traditional architecture today. The overall cultural and architectural knowledge is extremely extensive and will not be fully represented in this dissertation. This document, however, does provide the basic knowledge of materials, structural design, maintenance, and deeper meaning of Hopi traditional architecture.

Material

The construction for a traditional Hopi home is extensive and the guideline, *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses,* provided by the Hopi Cultural Preservation Office shows detailed information of how a traditional home was constructed. This provides a guideline of how to repair and maintain a traditional Hopi home. Being made of stone, this produces a strong memorable feature in Hopi architecture. The use of earthen materials emphasizes the deep connection that

the Hopi people and the land share with each other. The *tu'kwa* (walls) (Fig.16) is made from *o'wa* (sandstone) and *o'o'wawya* (smaller stones as chinking) with *tsöqa* (clay mortar) in between.[71] Each material is carefully selected because the wrong combination the *palwi* (plaster) may not stay, which could expose the *tsöqa* to the elements which causes it to crack and, overall, the house may start wearing down a lot quicker than normal. The structure of the roof system (Fig.17) consists of five materials that crisscross one another. The *lestavi* (wood beam) is the main support system for the roof and the material that distributes the weight is the *wunakwap'pi* (pole). The third material can be either *qahavi* (willow) or *suuvi* (cliff rose) and both materials provide flexibility. The last two materials are *söhökwappi* (grass) and the *nayavu* (clay). The *söhökwappi* creates a bed for the *nayavu* to rest on.[72] Material for the *kii'ami* (roof) and *kitso'vi* (roof terraces) are gathered in the surrounding area; however, the material for the main roof support *lestavi* and *tsöqökni* (wood columns) has to be gathered from a further distance because there are no trees near the village's edge. The trees trunks were sometimes gathered in Flagstaff, Arizona, which is approximately 100 miles southwest of the Hopi Reservation, or to the east past what is now called Window Rock, Arizona. The *kitso'vi* provides a space for the Hopi people to dry their food (Fig.18) and observe ceremonies (Fig.19). The *tumqöpqö* (cooking area) would be on the *tupatsi'povi* (first terrace), the *qöpqö* (fireplace) would be in the corner, and the *tumtsok'ki* (*piki* room) (Fig.20) would have the *tu'ma* (*piki* stone).[73]

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[71] *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.4. (Arizona: The Hopi Foundation, 1996), 11.
[72] *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.8. (Arizona: The Hopi Foundation, 1996), 6.
[73] *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.9. (Arizona: The Hopi Foundation, 1996), 13.

Figure 16. Left – Tu'kwa (Masonry wall) construction.

(1) Tu'kwa (Masonry wall), with o'wa (stone), o'o'wawya (chinking), and tsöqa (mortar)
(2) Existing layer of palwi (plaster) and tuuma (whitewash). Remains of the plaster can be re-tempered and used again. Layers will also accept fresh plaster.
(3) Fresh palwi (plaster) added over existing layers or new layers, which serve as a base coat.
(4) Tuuma (whitewash) applied over fresh palwi (plaster).

Source: *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.9. Arizona: The Hopi Foundation, 1996

Figure 17. Below – Perspective showing the roof elements

(A) Tutsyavu – Flagstone
(B) O'wa – Stone
(C) Nuyavu – Clay
(D) Söhökwappi – Grass
(E) Qahavi, Suuvi – Brush
(F) Wunakwap'pi – Pole
(G) Lestavi – Beam

Source: *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.8. Arizona: The Hopi Foundation, 1996.

Figure 18. Top – “Corn is carefully organized and stacked by color on terraces for drying, circa 1910."

Figure 19. Bottom Left- "The tupatsi'povi (roof terrace) surrounding plazas have always been a gathering place for spectators during ceremonies. Mishongovi, August 17, 1897.”

Figure 20. Right – "Piki fireplace with hood above that was framed using dimensional wood. circa 1911.”

Source: *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.4 & 8. Arizona: The Hopi Foundation, 1996.

Structural Design

Hopi architecture reflects the architecture seen in Chaco Canyon, Mesa Verde, and other comparable sites. The site has enormous influence in the design and construction, not only for the ancient architecture from the ancestors, but for the traditional Hopi architecture as well. Before the advancement of technology, architecture relied on the site to provide the building materials. The Hopi people utilized different type of sand to build their houses. Sand may seem to be a weak building material and, in some ways, this is true. However, sand can change its form from being soft to hard and from weak to strong. It can easily be damaged by human contact, washed away, or blown away but earth is resilient and can be used to make adobe bricks, rammed earth walls, or can be taken and shaped into a sandstone brick. If arranged with enough material, the compressing forces in return can make the structure stronger (Fig.21). Current architecture that use sandstone in their design are being constructed with the intent to use precise measurements and calculations in order to minimize material usage and construction time. However, I was told that the construction of a traditional house does not depend on calculated measurements. Rather, it was a skill that was developed over time and years of collected knowledge of the materials. Eldon Kalemsa, a Hopi elder from the village of Sipaulovi, shares his story;

Everything was basically mud, water, and you can see with the old houses they're not measured blocks. No, they

Figure 21. "A masonry wall seldom fails of direct compressive stress on the material. It fails when other stress causes the wall to tip over."

Source: *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.4. Arizona: The Hopi Foundation, 1996.

are basically walls with rocks stuck in it. (Fig.22) You'd be surprised, but it was maintained, it was durable, it held, and all of those things…I was fortunate too, one of my grandpas, Clark, he was a builder, he was a stone builder. We kind of referred to him as building Sipaulovi because he built majority of those houses up there, the stone houses. But he was a little man, a little guy. I always referred to him as Popeye because as little as he was these rocks were nothing to him. I mean he could just grab them like that and set them and that's just shoulder strength. You don't have two people trying to put it on there. That's how they were, they were good. Later, I think they may have learned the line levels but a lot of it was all eyeball. That was the art, the gifts that some of the individuals had.[74]

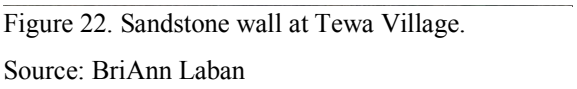

Figure 22. Sandstone wall at Tewa Village. Source: BriAnn Laban

The builder's ability to eyeball the proper arrangement of various size sandstones is a gift but this results in creating an imprecise structural sandstone wall. However, the construction of a traditional sandstone wall depends on the imprecise structural arrangement of stones because it then allows the house to adapt to the changes, such as the possibility of expanding the house or the erosion of the materials caused by the

[74] Eldon Kalemsa, interview by BriAnn Laban, Hopi Reservation, November 2016

elements. (Fig.23) This structural system is called “indeterminate structure” because the walls are stable but using an imprecise arrangement allows the loads to have more than one pattern of equilibrium,[75] unlike having a determinate structure that provides only a few places of equilibrium.

Figure 23. An imprecise structural arrangement of stones results in the structural system being an "indeterminate structure."

Source: BriAnn Laban

Using sandstone as the main building material not only creates a structure that is durable but it’s also a material that helps regulate the temperature within the home. There are two methods that are used to help regulate the house temperature. One method is using insulation and the other is utilizing a material’s thermal mass. There is often a misunderstanding with thermal mass and commonly gets confused with insulation. However, both methods regulate the temperature but they both work in different ways. For example, today’s modern houses use materials, such as mineral wool, polyurethane, cementitious spray foam, and many others to insulate a wood frame house. While Hopi traditional architecture relied on thermal mass to regulate the temperature inside the home.

The R-value rating system is used to best evaluate the capability of insulation. Energy Star describes R-value as “a measure of insulation’s ability to resist heat traveling

[75] *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.4. (Arizona: The Hopi Foundation, 1996), 4.

through it. The higher the R-Value the better the thermal performance of the insulation."[76] However, earthen materials like adobe, rammed earth, and sandstone cannot be easily explained with R-value alone. For example, the R-value of a 24" earthen wall is equivalent to an R-value of 7.[77] According to Energy Star's recommended home insulation, R7 is a low R-value for houses in the southwest region. (Fig.24) Therefore, R-value should not be used to express the energy efficiency of earthen materials. Instead, the method that is used to measure the energy efficiency of an earthen home is through the materials thermal mass.

Figure 24. Recommended insulation levels for retrofitting existing wood-framed buildings.

"Energy Savings at Home," *ENERGY STAR*. Accessed April 20, 2016. https://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_insulation_table

[76] "Recommended Home Insulation R– Values," *ENERGY STAR*. Accessed April 20, 2016. https://www.energystar.gov/index.cfm?c=home_sealing.hm_improvement_insulation_table
[77] "Benefits of Masonry," *MasonryforLife.* Accessed April 20, 2016. http://www.masonryforlife.com/Energy.htm

Thermal mass is used to describe the efficiency of a material, specifically, earthen material's ability to store heat energy and its resistance to change temperature as heat is added or removed. Every earthen wall has the capability to store heat because of these four factors: density, specific heat, thermal capacity, and thermal lag. These are the four factors to know before understanding how earthen material's energy performance work. The scientific terminology of density, specific heat, thermal capacity, and thermal lag are:

> Density is the mass of a material per unit volume. In the Imperial system, density is given as lb/ft3; in the SI system, it is given as kg/m3…Specific heat is a measure of the amount of heat required to raise the temperature of a given mass of material by 1º. In the Imperial system, this is expressed as Btu/lb ºF; in the SI system, it is expressed as kJ/kg K. It takes less energy input to raise the temperature of a low-specific-heat material than that of a high-specific-heat material…Thermal capacity (or thermal mass) is an indicator of the ability of a material to store heat per unit volume. The greater the thermal capacity of a material, the more heat it can store in a given volume per degree of temperature increase. Thermal capacity for a material is obtained by taking the product of density and specific heat. Units are J/K…With high thermal mass, it can take hours for heat to flow from one side of the envelope to the other. This slowing of the flow of heat is called "thermal lag" (or time lag) and is measured as the time

difference between peak

temperature on the outside surface

of a building element and the peak

temperature on the inside

surface.[78]

Figure 25. High density vs Low density

Source: BriAnn Laban

Basically, the higher the density of the material the better it is at storing more heat. The more porous the material, that is the less dense it is, it gives the heat the opportunity to escape out. (Fig.25) The higher the specific heat the more energy is needed to change the material temperature. (Fig.26) For example,

Figure 26. Density, specific heat and thermal mass of a range of materials.

Source: "Thermal Mass & its Role in Building Comfort and Energy Efficiency," Digital image. *EcoSpecifier Global*. Accessed March 28, 2016. http://www.ecospecifier.com.au/knowledge-green/technical-guides/technical-guide-4-thermal-mass-its-role-in-building-comfort-and-energy-efficiency.aspx

[78] Autodesk, "Thermal Properties of Materials," *Autodesk Sustainability Workshop*, 2011. Accessed March 28, 2016. http://sustainabilityworkshop.autodesk.com/buildings/thermal-properties-materials

a bucket of water is placed outside to absorb the sun's heat. The concrete ground is also collecting the sun's heat. By mid-afternoon you step outside with your bare feet and feel the heat that is stored in the concrete floor but once you step in the pool of water it is still cool. Water's high specific heat prevents it from boiling so easily. Next, to calculate the thermal capacity is to multiply the material's density and specific heat. The result reveals how much heat can be stored per unit volume. Finally, the thermal lag determines when the heat, that was stored in the material throughout the day, will distribute back out into the interior of the building. Thermal capacity plays a significant role in thermal lag because the higher the thermal capacity the longer the lag time will be. Simply put, the thermal lag is determined by the thickness of the material. The thinner the material the sooner the heat will emit out. The thicker the material the longer it will take for the heat to travel and emit out. For example, "some materials, like glass, do not have much of a thermal lag. But the thermal lag can be as long as eight or nine hours for constructions with high thermal mass like double-brick or rammed earth walls".[79]

The ancestors may not have had the scientific terminology to describe this sensation but living in these traditional Hopi houses they knew and understood the importance of thermal mass. The understanding of thermal mass can be heard through the voices of the elders and a few of the younger generations. Their comprehension is described through their lived experience. It is fortunate that the current Hopi and Tewa residents are able to express this knowledge without having to study the material in a scientific approach. Randolph Mahle, Neomi Nahee, and Leon Nuvayestewa are

[79] Autodesk, "Thermal Properties of Materials," *Autodesk Sustainability Workshop*, 2011. Accessed March 28, 2016. http://sustainabilityworkshop.autodesk.com/buildings/thermal-properties-materials

individuals who grew up in these sandstone structures and they all remember how the house would regulate the heat throughout the seasons.

> *Neomi Nahee: I think that was kind of the insulation maybe, when they plastered the wall. To me that was kind of the insulation because in the summer it was cold and winter it's warm.*[80]

> *Randolph Mahle: I think, the way our floorplan and the way our homes were built was for weatherizing and stuff like that. We used solid stone to keep it warm during the winter and keep it cool during the summer.*[81]

> *Leon Nuvayestewa: The houses back then were made from stone and that's good insulation. The walls were thick. Sometimes there 16" or 12". Right now, if you get a block it's only, well I guess they are 16" thick too but some of the house are probably this thick. I know down at Walpi, that kiva, that wall is about, Iss thuti it's about this thick. So, the homes were made from rock and that retained the heat. That, to me, was good about Hopi houses.*[82]

Maintenance

The exterior of the house is kept to its earthen tone to complement and connect to the landscape. Some of the traditional houses, particularly the ones in the plaza, have a complete finish of plaster. This gives the exterior wall a smooth and neat aesthetic. If it isn't plastered, then the walls show the rough, rigid layers of sandstone (Fig.27), creating its own unique appearance. This is a true representation of texture, color, and surface of

[80] Neomi Nahee, interview by BriAnn Laban, Hopi Reservation, November 2016
[81] Randolph Mahle, interview by BriAnn Laban, Hopi Reservation, Summer 2017.
[82] Leon Nuvayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016

the desert landscape. However, the intention of plastering, whitewashing, cleaning, and repairing the traditional Hopi house wasn't just for aesthetic reasons. Three Hopi and Tewa individuals share their explanation and story of maintaining a traditional Hopi house.

Joe Laban, a male Hopi elder, provides a simple explanation of why these traditional houses are still standing to this day.

Figure 27. "This clan house is having each tu'kwa (wall) carefully rendered, or covered, with palwitoqa (plaster) to protect underlying o'wa (sandstone) from weathering."
Source: *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.4. Arizona: The Hopi Foundation, 1996.

> *The traditional houses in the villages, like around the plaza, they say that those old traditional houses, they don't crack. They've been standing for hundreds of years. We like to say those houses don't crack. That they are the best constructed house. But number one, is that those traditional houses are sitting on a solid bedrock. So, they have the best foundation that anybody can ask for. Then when you look at the walls, the masonry walls, the rock walls, the clay walls, are that thick, at minimum some of them are that thick and that adds to the stability. And we say they don't crack because you never see those houses with cracks on them. But we have the best housing maintenance program. You have to maintain a house, a car, anything that you use that moves, you have to maintain it. Otherwise, it's going to fall apart. Same way with those houses, every year people*

get on them because of dances and stuff like that. But every year we have a snake dance, we have a flute dance. With those dances it basically a village policy that we patch up the walls and whitewash the walls around the plaza. So maybe a month or two, or shortly before these dances people are out there plastering the walls, whitewashing the walls, and they patch up the cracks. It lasts another year and the following year you do it again. That's why you don't see any cracks.[83]

Evangeline Nuvayestewa, a female Hopi elder, shares her experience of helping to maintain the traditional Hopi home she grew up in.

Sometime before having ceremonies, the girls came and made food and they all went down and they whitewashed and cleaned down there. They washed the walls and everything and plastered the traditional way outside, with the hands. Then they went to the rest of the homes like that. That's the way it should be, that's how we clean it…That's what they do. So, all that is done and then we go feed them at the Kiva and then we all eat together. That's the way we care for the homes, especially the clan houses that are in there…Our floors were sand, clay floors, and we use to have these shining rocks and every time we use to clean it by, after we sweep it off, our Siyah would sprinkle water on it or they blow it out from their mouth like that, and then it was our job to polish. We had a nice shining floor all the time because we did that with the stone. We didn't have any ammonium or anything we just had it like that all the time…I would rather have my clay floor because I like the smell of the earth, especially when it's wet. Then our walls we

[83] Joe Laban, interview by BriAnn Laban, Hopi Reservation, November 2016

use to whitewash all the time, we keep it clean by whitewashing. That use to smell really good and when we get done with it we use to always lick the walls. It gave the home a nice earthly smell. I prefer that to the smell of Mr. Clean and all the stuff you clean the floors with. I thought that was, to me, a homey touch for a house. And it gave us responsibilities again but it was always fun to be able to polish the floors. We used to polish it and we be crawling around on our knees and then do the walls.[84]

Stet Lomayestewa, a male Hopi elder, shares his knowledge of maintaining and repairing a traditional Hopi roof.

Every house, every traditional house at the village, it use to leak. Then we go and get mud again, they call it tuuma, that mud it closes itself. It would get wet about but it would close itself. But if it starts coming off, they call it pawihaypi, that pipe that sticks out and water goes down it. If water starts going down, it will just carry that mud down there and run it off the roof. When that storms over we had to go get mud again and then patch up the roofs.[85]

It was work to maintain a traditional Hopi house but it was a moment to bond and become a part of the house. Traditional Hopi architecture displays the Hopi and Tewa people's hard-work and values towards their houses. Otherwise, if they didn't have this hard-work ethic, the houses would be full of cracks like the houses away from the plaza or off the mesa. Some of the modern houses are falling apart because nobody maintains them or work to fix them. Part of maintaining Hopi traditional architecture is plastering,

[84] Evangeline Nuvayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016
[85] Stet Lomayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016

whitewashing, cleaning, and repairing but even these acts aren't done to simply maintain the integrity of the house. There is deep meaning in planning, constructing, and maintaining a traditional Hopi home.

Deeper Meaning

Everything has a purpose. If it didn't have a purpose, then it wasn't needed. The same value is portrayed in Hopi traditional architecture. There are multiple meanings within a simple design in Hopi traditional architecture. However, without the exposure of the Hopi traditional designs, the deeper meaning will cease to exist. For example, one feature of Hopi traditional architecture is that the houses and the villages are oriented to the east. Yet, the modern houses, which include HUD houses, trailer homes, and G-sheds, are oriented in all different directions. Leigh Kuwanwisiwma and Sue Kuyvaya share the Hopi perspective of why it is important to have the house oriented to the east.

> *Leigh Kuwanwisiwma: The orientation of the home is really important for a number of reasons. When you look at all of our villages today versus some of these subdivisions, or some of these kind of modern planned communities, they are so contrasting in the orientation. A home is always and is required culturally, to be oriented towards the east, to the rising sun. You see that with all of our traditional villages. You don't have them towards this way or that way, it's always towards the east. The reason is that, if you look at some of the old architecture around homes, around each home is the parapet up on top. And then on the side is another little wall that protrudes out of there, the soho'at. It's the bangs, soho. So, it's like that in all of the traditional homes because that becomes the pitsongwa. These are all architectural terms but they actually apply to the*

human too. Pitsonga is your face. So, the face is, literally of a home, always faces east because that's when the sun and your home, which is alive, will see and greet each other the moment when the sun comes up. That's the reason why. The other equally important reason is for the baby naming, the 20-day naming ceremony. The child always goes out to the east, to greet the sun. Never is a child supposed to go out this way or this way or this way. After the blessing occurs the grandma always takes that front door facing east to greet the sun. And that's where, again, the sun not only greets the infant but also the home, that's the caretaker. So those are cultural reason why the orientation is important. And that's life, but the same thing applies at death. You never, if someone passes away in the home, take the body out this way or that way. You always take the body out the same orientation. So that when they are taken to the grave their path is already set because the next day, on the fourth day, the spirit is going to come out. The body and the spirit are taking out to prepare to greet the sun again.

Sue Kuyvaya: What I was taught too was when you do things opposite it's always Musingwu. That's death and you know that death is always the opposite. Like your home is facing this way, Tuwa't pam maskita.

Leigh Kuwanwisiwma: You're making a home for death. The spirit goes to the Grand Canyon and that's where the spiritual people reside. So, your home should be like this, to the east, but if it's like this, to the west, that's not good because your home is facing where you go after death. You want your home to the east, where life is going to begin for you. That's the reason why. And then during weddings, when they finish and when they wash both the groom and the bride.

The home is like this towards the east and then the mom, the bride's mom, they wash their hair…The orientation is already good and they're going to bless them and finally wash their hair, they never use the hand that's going to be facing this way. They use the hand that's going to the rising sun. All of these are how the culture behaves and so the orientation of the house is important.[86]

A project didn't proceed without intense planning and support from the whole community. Professionalism and talented skills came from the community. Nothing was decided by one individual or one family. The goal was to establish a multi-generational housing system that welcomed the entire clan family, the whole village community, and those yet to come. The entire community was a part of the planning process because traditional Hopi architecture connected homes to one another with adjacent or adjoining walls. Houses weren't separate, individual standing structures like how you see housing today with their own yards and distinct style. One clan home is connected to the other with just one wall. So, if an addition was needed or an entire new structure was needed, the community would work together to construct and plan the project. The involvement and support of the community helped with the gathering of materials, construction, and maintenance of the houses. Without this support, the planning, construction, and maintenance of the houses would never be built. Eldon Kalemsa, Bernita Duwahoyeoma, and Leigh Kuwanwisiwma share their knowledge on how the traditional Hopi houses were designed around a common wall and the deeper meaning of the common wall.

Eldon Kalemsa: The village only had one wall because everybody cooperated in

[86] Leigh Kuwanwisiwma and Sue Kuyvaya, interview by BriAnn Laban, Hopi Reservation, November 2016

maintaining it. Every Home-Dance, the whole plaza was plastered and redone. It not only renewed the complexion, the face, but we now sustained it, we put more mud on it, made it nicer, but that was the maintenance. That maintained it to where it was always strong.[87]

Bernita Duwahoyeoma: Another thing in the villages is that you don't have these gaps between houses. It's more evident in the plaza, where there's a common wall between houses. It not only promotes unity and communal-ness, but it also would be argued that it provides insulation for the whole village in some way. And then you have that proximity to people and originally it would be your matrilineal family that would build close together and that's why you had the multi-stories on the houses.[88]

Leigh Kuwanwisiwma: When a girl [gets] married, their family assigns them a space on top to build their home. When a second girl from that family got married then they build their home right next to the other house. So that's how the stories evolved over time, sometimes as many as four stories high. With the plaza and these kinds of homes, in the Hopi way, were planned communities within this traditional setting. Traditionally, they were all built with common walls, they were never separated. They were always like this with that common wall and that represented, visually and emotionally, how the families and the clans were bonded together. They were one. They weren't separated like we see these modern homes all over now. I guess we slowly set privacy as more important. Saying, "I

[87] Eldon Kalemsa, interview by BriAnn Laban, Hopi Reservation, November 2016
[88] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, October 2017.

don't want to be living in the village. I don't want to be peeking into the next-door neighbor every morning. I want to be out there alone." But that's what was important, it was through these common walls that helped with that emotion and that philosophy of being one. Being one spiritually, being one emotionally.[89]

There is little to no aesthetic decoration seen in Hopi traditional architecture. Adorning symbols with mud smearing wasn't seen as decoration. There was always a deeper meaning to such symbols. Sometimes there are clan symbols drawn on the exterior walls with the plaster. However, over time, as the rain falls on the wall, eventually the symbol will wash away. It may take weeks, months, or even years before the symbol is completely washed off but one of the significant meaning for this has to do with the wedding ceremony. Other times the clan symbols represent the clan house, displaying the clan that belongs to that house. These acts weren't for the purpose of decoration. Decoration is typically used to express culture in a 2D representation. If there were any sort of symbols on the exterior walls or interior walls of a traditional Hopi house then there was a purpose and great meaning behind it. It wasn't displayed for art purposes, but rather to teach Hopi values and to encourage the people to put those values into practice. One major Hopi value is retold by Leigh Kuwanwisiwma. He shares his knowledge on how the traditional Hopi architecture reflects the female and the deeper meaning within that reflection:

Starting with those bangs up there on top then the bangs on the side because those features display that the home is a female. The home is always a female. The home is, traditionally, always whitewash white. You know with that clay. It's

[89] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

always whitewash because it's the womb. It's a place of birthing and kids who are innocent. So, the home is whitewashed to reflect the innocent, which is white, purity in mind and soul and body. It's a sanctuary for life. That's why it's always white inside. Never like we do now, all blue or all pink. It's always white because the home is a female and within the home, of course, birthing occurs. And that's the womb for the family. It's always to be good and it always has to be positive because that's where a child, especially a girl grows up into adulthood, eventually into a mew-weh, a daughter in-law. To greet and welcome people. That's where she learns that and through her learning process reflects what the interior of the wall is reflecting and is telling her. Which is there's happiness here, there's compassion here, there's all the good stuff in Hopi and Tewa values. So, the home being a female is really important.[90]

Today, the deep meaning is lost and communal working together towards building a house is being replaced with easy-to-construct wood frame houses. There has been a lot of encouragement with the idea that wood frame houses are the best building materials to use in today's housing construction. Wood frame houses are appropriate for many climatic regions for they are available, light weight, and easy to handle. This may be true, but the wood frame housing pales in comparison to the traditional Hopi homes. As time passed there is fluctuation of interest in building with earthen materials. The Hopi traditional architecture exemplifies the use of earthen materials but with the influence of other knowledge, the change of society's perspective, and the push of technology, the idea of using earth as a building material begins to fade away.

[90] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

3.1.2 Hopi Tribal Housing Authority

Figure 28. HTHA housing types. From 1983-2017.
Source: BriAnn Laban

The Hopi Tribal Housing Authority (HTHA) is the official housing organization located on Hopi and has been serving the Hopi people for over 50 years.[91] The HTHA reports that:

> The Hopi Tribal Authority (HTHA) is the Tribally Designated Housing Entity (TDHE) of the Hopi Tribe, to address the housing needs of the Hopi Tribe pursuant to Ordinance #15 and as provided by the Native American Housing Assistance and Self Determination Act (NAHASDA) of 1996.[92]

NAHASDA is the Act that works towards reorganizing "the system of housing assistance

[91] "About Us," *Hopi Tribal Housing Authority*, accessed September 12, 2016, www.htha.org/about-us.
[92] Hopi Tribal Housing Authority, *Hopi Tribal Housing Authority: Tenant Base Rental Assistance Program* (Polacca, AZ: Hopi Tribal Housing Authority, 2017).

provided to Native Americans through the Department of Housing and Urban Development."[93] The HTHA then acts as the bridge between the Hopi community and the US Department of Housing and Urban Planning (HUD). Being partnered with HUD allows HTHA to have funding to help build houses on the Hopi Reservation by "eliminating several separate programs of assistance and replacing them with a block grant program," such as "the Indian Housing Block Grant (IHBG) which is a formula based grant program and Title VI Loan Guarantee which provides financing guarantees to Indian tribes for private market loans to develop affordable housing."[94] This partnership was created to address the need for "very low income tribal members" whose needs weren't being met by other housing programs. The Hopi Tribal Housing Authority's mission is committed to:

> Providing the Hopi Community opportunities for safe, decent, sanitary, and quality housing; to enable improvement of the physical conditions of housing developments; to continually upgrade the management and operations of the tribally designated Housing Entity while developing and enhancing a stronger, healthier and viable economic initiative related to low-income housing assistance; to include other housing opportunities available under the Native American Housing Assistance and Self-Determination Act of 1996.[95]

The impact of the HTHA housing, or often called HUD houses, has provided affordable housing to the Hopi community through separate programs assisting in different ways

[93] United States Department of Housing and Urban Development, "NAHASDA," *HUD.GOV*, accessed September 12, 2016, https://www.hud.gov/program_offices/public_indian_housing/ih/codetalk/nahasda.
[94] United States Department of Housing and Urban Development, "NAHASDA," *HUD.GOV*, accessed September 12, 2016, https://www.hud.gov/program_offices/public_indian_housing/ih/codetalk/nahasda.
[95] Hopi Tribal Housing Authority, *Hopi Tribal Housing Authority: Tenant Base Rental Assistance Program* (Polacca, AZ: Hopi Tribal Housing Authority, 2017).

that address the individual's needs. The different types of programs include Mortgage Buy-Down Assistance Program, Home Rehabilitation Program, Home Ownership Program, Tax Credit Rental/ Low Income Units, BIA Home Improvement Program, and Tenant Based Rental Assistance.[96] Each program aids in the rehabilitation or repair of a HUD house, having low rent, and building a house from the ground up.

The HUD houses and several rental housing complexes are scattered across the Hopi Reservation, with the furthest rental units located in Winslow, Arizona. The majority of these houses are typically scattered just below the three mesas and the surrounding area. One of the reasons for locating HUD houses below the mesas is to have easy access to the water and electric utilities. The other reasons include the fact that there isn't enough space on the mesa tops and the most typical reason is that the available clan's land extends beyond the village edge. The want for modern commodities, such as running water and electricity, has caused the house design to reflect the modern conveniences and aesthetics instead of reflecting the environment and cultural values. It often appears to be misplaced in such a beautiful landscape.

Many homeowners have expressed the need and want of cultural representation in their houses; unfortunately, there is so little that HTHA can do for they have codes and guidelines they need to follow in order to have continued assistance from HUD. Rameen Ahmed wrote her thesis on *Housing from a Cultural Perspective: The Hopi Way of Dwelling*, and she expresses the same concern and understanding that HUD isn't geared towards representing culture in housing. She writes:

[96] "Programs," *Hopi Tribal Housing Authority*, accessed September 12, 2016, https://www.htha.org/programs.

> However, the history of federal housing shows that cultural appropriateness was not the intent behind low income housing…From the beginning there was an attitude of the dominant culture building for the subordinate. Lumping the Hopis with other low-income minorities and other Native American denied these groups any means of cultural and social interpretation, perhaps solving housing needs but creating new social-cultural disparity.[97]

HTHA tries to compensate by presenting alternative solutions that will make the homeowner happy, such as presenting a design with high-ceilings. This is a physical feature that many homeowners have grown to like and it is becoming a norm feature within the new HUD houses. Offering new features or other modern aesthetics are temporary solutions because HTHA still faces the issue of having to put more cultural emphasis in the HUD houses. The common solution that is seen is the use of 2D representation, such as water symbols or staggered step symbols, to make up for the lack of cultural emphasis in the designs of many HUD houses. (Fig.29)

Figure 29. Contemporary HUD House. The use of symbols below the window is an attempt of including cultural elements to the design.

Source: BriAnn Laban

[97] Rameen Ahmed, *Housing From a Cultural Perspective: The Hopi Way of Dwelling* (Arizona: University of Arizona), 24.

It may not be a complete or appropriate cultural representation but HTHA still makes an effort to work with the Hopi culture and they do respect the Hopi way of life. One primary and continuously practiced example is the respect to how the Hopi people organize and assign land. Before HTHA can even build a house, they need to know if the location chosen received the clan's approval. It is up to the potential homeowner to acquire proper documentation that states the proposed land is approved and doesn't encroach on the land that is cared for by the other clans. If the clan leader doesn't approve of the first two potential land choices, then HTHA will have to put the applicant back on the waiting list for this process takes time and HTHA has a long waiting list. Basically, without the clan land approval the house cannot be constructed. If this process goes smoothly and the potential homeowner gets the clan's approval, then the client-business relationship is basically exhausted. HTHA hardly involves the homeowner moving forward in the process. This results in creating a gap of communication and the potential opportunity for HTHA to learn of the cultural needs that could be represented in the house.

This communication gap is evident in the voices of many HUD homeowners. Neomi Nahee is from the village of Tewa and she went through the HTHA housing process twice. Each experience was different but the lack of involvement was still evident through both process. Unfortunately, Neomi's first house, and the other similar houses, became an unsafe house to live in. The issue was that the wood framing was too weak to carry the sandstone veneer that wrapped around the entire house. The weight of the stone eventually became too much for the house and slowly the house began to split itself apart. This resulted in the construction of her new HUD house. While waiting for her second

house to be complete, Neomi realized the lack of communication between the homeowners and HTHA.

> *For the first house there was really no process. They just called us to a meeting and gave us an option between two houses, that's all I recall. The number of family members, at that time, determined how many bedrooms we would get. But the process was, we filled out our paper work and got our land assignment. Then they finally got to the phase where they were going to start our new project. They told us we had to choose between two designs. That stone house, traditional they called it (Fig.30), and the kind like Baha's house. I didn't want that kind because I wanted traditional. I wanted to stay with our culture and how the homes were on top. That's why I wanted the traditional one. So, I just chose that and that was pretty much it. Then they came and built the houses...But I wish it was built better because all our houses were cracking where the beams were in the ceiling. They were cracking and you could see the cracks. They tried everything to repair it but they put these, I don't even know what they were, but to me I couldn't help but wonder how that was going to hold it. So that's what the problem was with those houses. And even with that, I don't know maybe I wasn't paying attention, but all of a sudden, they were going to crash down the house because they weren't stable*

Figure 30. Family photos with "Traditional HTHA house" in the background.

Source: Neomi Nahee, Village of Tewa.

enough. They would come and try to do patch up jobs but they just covered it up…It was just like that and I don't remember choosing the tile, the color, and maybe they would have let us choose more but that's what I learned later one, like way later. I eventually learned that you have a say so. You can have meetings with your group and decide. Even make your own design of what kind of house you want. But I learned that later.

Then the second process we had a meeting to tell us that they were going to tear down the first house. We had meetings, Serena was very vocal about wanting…a straw bale or environmental friendly house. She wanted that and we discussed it but nobody went with her. I mean, we thought, made out of straw? We didn't know, I don't think nobody understood. I didn't understand it but now I do and I think I would have went with that if I understood it more. But we just straight out didn't want that kind. So that got denied and then they gave us, no they didn't let us choose between two houses. They just said this is the kind of house that you're going to have. (Fig.30) The first time they told us that was when they were going to start building. Then the next phase was picking a countertop, tile, and the exterior color of the house. That was about it and after that no more. That was it, plain and simple. The only thing we got to choose was the countertop, the tile, and what color we wanted the house to be. Then later on, like I said, I found out that we had every right to choose, even hire or find an architect to design our house. We could even go that far but I don't know how true that is because I never researched it or anything but they told me you have every right to design your own home. To decide what style you want, but I didn't know that. So now I was

> *telling Millie when she was going to get her house, I said tell them what kind of house you want. Tell them what you want in it because you're the one that's going to be living in it and we have that right. They can't choose for us but they do that. They, more or less, tell us it is either this one or this one. The house we're in now…I didn't get to choose but the countertop, the tile and the outside color, that's all. And I think the only thing I mentioned was I wanted two bathrooms. So that's when, I think, they made our room smaller. That's the only thing.*[98]

Fortunately, HTHA is always looking for improvement and with the "2017 Scattered Site Housing" project they attempted a design-build approach. The HTHA proposed:

> The Hopi Tribal Housing Authority (OWNER) is soliciting Proposals from qualified teams to provide design-build services for the HTHA and construction of 20 scattered site housing located within the Hopi Reservation, Northern Arizona…The successful proposer will deliver an innovative, highly-efficient Design-Build design in keeping with the surrounding aesthetics that best meets the needs of homeowners without sacrificing quality and durability of material systems.[99]

This was HTHA attempt in trying something new that could possible increase the involvement of the community/homeowner and thus improve the overall quality of the home. Unfortunately, based on information acquired at the HTHA sponsored "2017

[98] Neomi Nahee, interview by BriAnn Laban, Hopi Reservation, November 2016.
[99] Hopi Tribal Housing Authority, "The Hopi Tribal Housing Authority is Soliciting Proposals for Design-Build Services," *Hopi Tribal Housing Authority*, accessed August 23, 2017, http://azbex.com/wp-content/uploads/2014/11/The-Hopi-Tribal-Housing-Authority-is-Soliciting-Proposals-For-Design.pdf.

Housing Fair" (Fig.31) on September 8, 2017, the design- build approach proved to be more difficult than they expected. The reasoning wasn't because the community didn't want to be involved or that it was too difficult to organize, it was mainly because of money. The design-build process for HTHA turned out to be more expensive they initially anticipated.

The HTHA has served the Hopi community for over 50 years and, with each passing year, the program has improved it services for the Hopi community. In Washington, D.C on March 18, 2015, there was a Senate hearing addressing the Senate Bill 710, to reauthorize NAHASDA, Gary Cooper, a member of the Cherokee Nation and a board member of the National American Indian Housing Council (NAIHC) stated that, "NAHASDA has signaled a real improvement in the approach to housing problems in Indian country, away from the 'cookie-cutter model' that characterized past efforts."[100] This improvement can be seen with the new 20 scattered site housing and the Low Rent and Tax Credit Rental units in Winslow, Arizona. There is always room for improvement and HTHA is always looking for new procedures and innovative solutions to implement into their initiative and

Figure 31. 2017 HTHA Housing Fair.

Source: Hopi Tribal Housing Authority. "2017 HTHA Housing Fair." *Hopi Tutveni.*, Kykotsmovi, AZ, Sept. 5, 2017. https://www.hopi-nsn.gov/wp-content/uploads/2017/09/9-5-2017-Vol25-No17.pdf.

[100] Anne Minard, "Housing Conditions in Indian Country: 'Couch-Surfing and Overcrowded'; More is Needed." *Indian Country Media Network.* March 19, 2015. Accessed August 20, 2017. https://indiancountrymedianetwork.com/news/politics/housing-conditions-in-indian-country-couch-surfing-and-overcrowded-more-is-needed/.

approach. However, being tied with HUD who have their own protocols to follow, will slow down their potential to progress. Though they are adapting with new technologies, equipment, and design, there remains a dire need for cultural appropriateness to be directly addressed and incorporated before the "standard" HUD model on the Hopi Reservation accurately serves its true purpose of providing a space for the Hopi to live and grow, spiritually and culturally, as individuals, families, and community.

3.1.3 Alternative Housing Organizations: Red Feather Development Group & Hopi Tutskwa Permaculture Institute

Within the past 13 years, two alternative housing programs emerged on the Hopi Reservation to assist in the housing crisis. These alternative programs are called Red Feather Development Group (Red Feather) and Hopi Tutskwa Permaculture Institute (HTPI). Unlike Red Feather whose organization is entirely focused on the well-being and enhancement of tribal housing, HTPI has multiple programs within their organizations that help the Hopi community in diverse ways. Such as offering programs in restoration knowledge, leadership development, and hands-on training. However, there are two programs called Sustainable Homeownership Program and Natural Building Internship Program that focus on the housing issues on the Hopi Reservation. Red Feather and HTPI are two very distinct organizations with their own mission and process. The proceeding sections will discuss the unique characteristics that each program embraces. Beginning with the oldest program of the two, which is Red Feather, followed by HTPI. The ending of this section will conclude with the discussion of similarities both organizations share with each other, as well as the similarities that they share with HTHA.

Red Feather Development Group

Red Feather was founded in 1994 and is located in Montana where they first began to serve the Northern Cheyenne Tribe.[101] The Red Feather mission is:

> We envision a world where healthy and safe housing is available to all and we are all inspired to work collectively to create self-sustaining communities. We partner with American Indian nations to develop and implement sustainable solutions to the housing need within their communities.[102]

Figure 32. Red Feather Logo.

Source: Red Feather Development Group *logo, a*ccessed September 15, 2017. https://www.facebook.com/redfeatherdevelopment/

Over time, they expanded to help the Hopi Tribe and Navajo Nation in Arizona. Their involvement with the Hopi Tribe began in 2005 and since then they have "built straw bale houses, weatherized existing homes, repaired numerous dwellings and educated hundreds of Reservation residents with Do It Yourself workshops benefitting women, veterans, and young people."[103] They were able to achieve this by creating good relationship with Native communities and partnering with them so they can have access to safe and healthy housing. They built and improved housing conditions with "materials, providing green construction training and employment opportunities, and conducting community outreach and education on sustainable building practices, energy-efficiency,

[101] "Learn About Red Feather," *Red Feather Development Group*, accessed August 12, 2016, http://www.redfeather.org/learn-about-red-feather.html.
[102] "Learn About Red Feather," *Red Feather Development Group*, accessed August 12, 2016, http://www.redfeather.org/learn-about-red-feather.html.
[103] "The Hopi Tribe," *Red Feather Development Group*, accessed August 12, 2016, http://www.redfeather.org/hopi-tribe.html.

and healthy housing."[104]

Red Feather has had several projects (Fig.33) on the Hopi Reservation and some of those projects include building straw bale houses for several residents. With the help of volunteers from all over the country and the sweat equity of 64 hours from the homeowner, the projects on the Hopi Reservation are starting to add up.[105] Utilizing

Figure 33. Red Feather housing projects. From 2005-2014

Top Left – 2005, village of Hotevilla build. Source: "Hopi Nation Straw Bale Home," Digital image. *Homes Across America*, accessed September 5, 2017, http://homes-across-america.org/search/details.cfm?who=161&Feature=all&action=showDetails.
Top Right – 2010, village unknown. Source: "The 2011 Sustainable Home and Garden Tour," Digital image, *SES National Solar Tour*, accessed September 5, 2017, http://www.coconino.az.gov/DocumentCenter/View/5606.
Bottom Left – 2011, village unknown. Source: Straw bale House, accessed September 5, 2017, https://www.facebook.com/pg/redfeatherdevelopment/photos/?tab=album&album_id=10150360636152801.
Bottom Right – 2014, village of Hotevilla build. Source: Straw bale House, accessed September 5, 2017, https://www.facebook.com/pg/redfeatherdevelopment/photos/?tab=album&album_id=10153171194752801.

[104] "Our Nonprofit Community," *The Hopi Foundation*, accessed September 5, 2017, http://www.hopifoundation.org/our-nonprofit-community?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1.
[105] Tawahongva, Tyler, "Red Feather Builds Another House on Hopi," *Navajo-Hopi Observer*, September 28, 2010, accessed August 12, 2016, https://www.nhonews.com/news/2010/sep/28/red-feather-builds-another-house-on-hopi/?templates=desktop.

straw bale and timber as the structural and building material, Red Feather is able to offer an alternative, affordable, and energy- efficient house to the Hopi people. During their time with Hopi, Red Feather was able to provide eight sustainable homes to eight different families across the Hopi Reservation. However, in 2014, one such project helped them develop "the 'next generation' of Red Feather's energy-efficient, affordable, sustainable homes."[106] A year before the project, they hosted a design charrette with the Hopi community with the purpose of discussing lessons learned from previous projects, which could assist them in "developing plans for the next generation of [our] super energy efficient and affordable straw bale homes."[107] They were also hoping to hear from the community about their "ideas for integrating culturally significant design elements into the new home."[108] This led to the integration of cultural elements which includes: using traditional building materials, such as sandstone brick for decoration, local clay for earthen floors and walls, and *lestavi* (wood vigas, beams), an open floor plan that can accommodate the soci-cultural activities, and an east-facing entrance.[109] To this day, they are still providing their services, however, they are focusing more on completing repairs and roof replacements, with an emphasis on home health and safety.

The Red Feather's current projects are focused on developing a comprehensive Healthy Home Assessment survey that will be accessible to the low-moderate income

[106] "Hopi – New Home for Hotevella Family," *Red Feather Development Group,* August 8, 2014, accessed August 12, 2016, http://www.redfeather.org/past-projects-blog/hopi-sekayumptewa-home-hotevilla-august-2014.
[107] "Hopi – New Home for Hotevella Family," *Red Feather Development Group,* August 8, 2014, accessed August 12, 2016, http://www.redfeather.org/past-projects-blog/hopi-sekayumptewa-home-hotevilla-august-2014.
[108] Ibid.
[109] Ibid.

families of the Hopi and the Navajo Tribe of Arizona.[110] With the assistance of trained "Health Professionals and cultural insiders versed in cultural etiquette," they will assist with several Hopi houses and will work towards explaining the items provided to them in the "Home Kit while helping to identify home conditions that may be contributing to family health issues."[111] Their framework is based on the "7 Steps to a Healthy Home" which include: (1) Keep moisture out, (2) Keep your home safe, (3) Keep your home well-ventilated, (4) Keep you home pest-free, (5) Keep your home contaminant free, (6) Keep your house clean, and (7) Keep your home well-maintained.[112] They define a healthy home as "one that is constructed, maintained, and rehabilitated in a manner that promotes good resident health."[113] Following this framework and definition they are able to develop a "Healthy Homes Inspection and Maintenance" checklist. The checklist they have was adopted from the National Center for Healthy Housing checklist and was modified, with permission, to reflect the needs of Red Feather's client base.[114] Once the training is complete, the resident can utilize the checklist to assist them with annual and yearly checkups with the house.

Hopi Tutskwa Permaculture Institute

Next, we will discuss the Hopi Tutskwa Permaculture Institute (HTPI) which is a

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[110] "Direct Weatherization," *Red Feather Development Group*, accessed April 1, 2018, https://www.redfeather.org/direct-weatherization.html.
[111] "Hopi Nation Current Project," *Red Feather Development Group,* accessed August 22, 2017, http://www.redfeather.org/hopi-current-project.html.
[112] Red Feather, "7 Steps to a Healthy Home," *2013 Pathways to a Healthier Home,* (Bozeman, Mt, 2017), 3.
[113] Red Feather, "Healthy Homes Inspection and Maintenance Checklist," *2013 Pathways to a Healthier Home,* (Bozeman, Mt, 2017), 1.
[114] Red Feather, "Healthy Homes Inspection and Maintenance Checklist," *2013 Pathways to a Healthier Home,* (Bozeman, Mt, 2017), 1.

local organization located in Kykotsmovi, Arizona. This organization was co-founded by a Hopi woman, Lilian Hill, and her husband, Jacobo Marcus. The Hopi Tutskwa Permaculture Institute has been in operation since 2004 and the HTPI mission is:

> In the Hopi language "Hopi Tutskwa" refers to the life ways and knowledge of the land and soil. The origins of Hopi Tutskwa Permaculture stem from a deep commitment to maintain our distinct identity and lifeways as Hopi people in order to pass knowledge to the future generations and rebuild culturally sustainable and healthy communities.[115]

Figure 34. HTPI Logo.

Source: "Hopi Tutskwa Permaculture: Natural Building Internship Program," Digital image. *Hopi Tutskwa Permaculture Facebook*, accessed May 02, 2017, https://www.facebook.com/htpbuild/

With their mission statement as their foundation, HTPI has grown to offer multiple programs to the Hopi community that reflect the meaning of Hopi Tutskwa. Such programs include Kwang'wa Tsoki Orchard Restoration Project, Hopi Youth Summer Permaculture Program, and Living Learning Demonstration Site. However, it wasn't until 2015 when they launched the Sustainable Homeownership Program.

Their mission for the Sustainable Homeownership Program is to "provide low-income houses to the Hopi community by utilizing earthen and alternative building materials. Also exploring the usage of different sustainable technology."[116] The Hopi

[115] "About," *Hopi Tutskwa Permaculture Institute,* accessed August 22, 2017, https://www.hopitutskwa.org/about.
[116] "Hopi Tutskwa Sustainable Homeownership Program," *Hopi Tutskwa Permaculture Institute,* accessed August 22, 2017, https://www.hopitutskwa.org/sustainable-homeownership-program.

Tutskwa Sustainable Homeownership Program is new to the housing scene and now has completed three successful projects. They have created another affordable housing program by offering "families low interest rate loans," they "recruit volunteer student interns to complete the bulk of the construction labor," they "stick to a simple architectural plan, thereby limiting architectural and engineering costs," and they "use as many recycled and donated building materials as possible."[117]

The HTPI also emphasizes on using natural materials such as straw bale, cob, log beams, and sandstone to construct their homes. A part of their design strategy is to be independent from the public utilities. Therefore, a crucial element in their design strategy is to incorporate passive solar and energy efficient design. This includes a green house, photovoltaic solar electricity, solar water heater, and a water catchment system. The HTPI's design isn't a standard building system and the knowledge of construction is limited to the professionals. Therefore, part of their strategy is to have the family involved throughout the process. The homeowner is then required to contribute 205 hours in the construction of their home. [118] HTPI also encourages the other family members and community to be involved in the process so they can also learn. With the constant involvement of the family, especially the homeowner, they are able to gain the base knowledge of how the materials are utilized and, when needed, how to prepare such materials in case of having to fix small damages. This involvement gives them greater independence for they are now capable to care for their own house repairs.

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[117] "Hopi Tutskwa Sustainable Homeownership Program," *Hopi Tutskwa Permaculture Institute,* accessed August 22, 2017, https://www.hopitutskwa.org/sustainable-homeownership-program.
[118] "Hopi Tutskwa Sustainable Homeownership Program," *Hopi Tutskwa Permaculture Institute,* accessed August 22, 2017, https://www.hopitutskwa.org/sustainable-homeownership-program.

HTPI offers multiple programs to the Hopi community but they are strongly focused on the development and well-being of the youth. HTPI sees the importance in involving and teaching the youth the traditional and modern teachings of healthy living, environmental awareness, and community involvement. Their dedication to the youth is paramount to the program's growth and success. Therefore, in correlation to the Sustainable Homeownership Program, HTPI offers a unique program called the Natural Building Internship Program. Their goal through the internship program is to "train young, dedicated and emerging building professionals within the Hopi community" and to "inspire participants as well as others to build in a more sustainable and culturally harmonious way."[119]

The young dedicated Hopi students are taught to work with earthen materials and are educated on passive solar and energy efficient design. With the help of the Hopi Tutskwa Internship Program, these homes were constructed within the timeline they set. They faced many obstacles during the build but, as long as they worked together as a team, they were able to overcome such obstacles. The guidance of general contractors, instructors, and staff provides the students with the opportunity to learn and build the home from foundation to occupying. Through the internship

Figure 35. Masayesva 2017 spring build.

Source: "Hopi Tutskwa Permaculture: Natural Building Internship Program," Digital image. *Facebook*, accessed August 22, 2017,

[119] "Natural Building Internship," *Hopi Tutskwa Permaculture Institute,* accessed August 22, 2017, https://www.hopitutskwa.org/natural-building-internship.

program, students are able to learn the importance of helping their community, the importance of craftsmanship, and the feeling of accomplishment. Three students from the 2017 Spring Build (Fig. 35) were able to provide information on their experience while working with the program; CiAnna Sakeva, Alex Quiyo, and Amanda Onsae.

Alex Quiyo, from the village of Hotevilla, wrote:

> *Building one of the homes is like being part of an old system that existed for many hundreds of years. The building techniques may have changed since old times…but the amount of labor, and craftsmanship makes us feel like the house will have its unique feel to it. That separates it from a 'slapped-together commercial construction job'…By the end of the day we all feel good knowing we are putting our all into this build all day. We put our minds toward making sure the house ties together good. (Fig.36) So the occupants of the house will feel and live comfortably for the many years to come once we've finished. When this house is done, and all the components are in, this house will serve its occupants to its maximum*

Figure 36. Working together as a team to accomplish a common goal. An old value that never dies.

Source: "Learning It Up, HTP Style," Digital image. *Hopi Tutskwa Permaculture Institute*, accessed August 22, 2017, https://www.hopitutskwa.org/single-post/2017/05/08/Learning-It-Up-HTP-Style.

efficiency using all clean forms of energy…These houses can benefit not only humans, but nature as well. I'd like to be a part of putting up more of these homes in this harsh dry desert area in the future.[120]

CiAnna Sakeva, from the village of Sichomovi, shares her experience:

Building a house with these types of qualities and being able to say, 'Hey, I did that/I know what that is' is what made me want to be a part of Hopi Tutskwa…Working with the lestavi was my favorite part so far in the build. From seeing it as a huge log of wood to being used as a way to support the house I saw interesting. Another part of the build I also enjoyed was working in interesting weather. The snow didn't stop a few of us from working, but instead it motivated us to get home so that meant working harder.[121] *(Fig. 37)*

Figure 37. Above image – working through the snow despite the cold.
Below image – learning how to work with the wood logs.

Source: "3 Months with HTP," Digital image. *Hopi Tutskwa Permaculture Institute*, accessed August 22, 2017, https://www.hopitutskwa.org/single-post/2017/05/22/3-Months-with-HTP.

Amanda Onsae, from the village of Hotevilla, shares her experience:

I like working with HTP building sustainable houses and knowing I was a part of

[120] Alex Quiyo, "Learning It Up, HTP Style," *Hopi Tutskwa Permaculture Institute,* May 8, 2017. Accessed August 22, 2017, https://www.hopitutskwa.org/single-post/2017/05/08/Learning-It-Up-HTP-Style.
[121] CiAnna Sakeva, "Learning It Up, HTP Style," *Hopi Tutskwa Permaculture Institute,* May 8, 2017. Accessed August 22, 2017, https://www.hopitutskwa.org/single-post/2017/05/22/3-Months-with-HTP.

something awesome and unique. The program has taught me a lot of construction techniques and how to use the materials we have here on Hopi to incorporate with the building of each home. (Fig.38) I'm still learning every day and I'm very thankful to have been given another opportunity to be a part of the build team.[122]

Figure 38. Student intern working on shaping the stone. A traditional technique using modern tools.

Source: "Masayesva 2017 Spring Build," Digital image. *Hopi Tutskwa Permaculture Institute*, accessed August 22, 2017, https://www.hopitutskwa.org/single-post/2017/04/04/Masayesva-2017-Spring-Build.

HTPI not only works to inspire the participants but they hope to inspire the entire Hopi community to build in a more sustainable and culturally harmonious way. With the help of the internship program, volunteers from the community and the partnership with Community Rebuilds organization, the Hopi Tutskwa Sustainable Homeownership Program is able to meet these requirements and goals. HTPI has set many goals and each day they are working towards accomplishing them with the help of the community and establishing new relationships through various networking. One of their goals extends beyond the Hopi Reservation and that is to "build a unique, dynamic, and affordable housing program that can be utilized as a model for other building programs."[123]

[122] Amanda Onsae, "Masayesva 2017 Spring Build," *Hopi Tutskwa Permaculture Institute,* April 4, 2017. Accessed August 22, 2017, https://www.hopitutskwa.org/single-post/2017/04/04/Masayesva-2017-Spring-Build.
[123] "Natural Building Internship," *Hopi Tutskwa Permaculture Institute,* accessed August 22, 2017, https://www.hopitutskwa.org/natural-building-internship.

Similarities Among Red Feather, HTPI, and HTHA

Today, Red Feather and HTPI have several successful projects on the Hopi Reservation and their success is greatly attributed by their uniqueness. However, both organizations share commonalities that equally attribute to their success on the Hopi Reservation. Such as, they both value the importance of family and community involvement. Everyone that chooses to be involve are given the opportunity to help with the construction process. Their involvement not only helps lower the cost but it ultimately teaches them how to construct and maintain their own house. Also, both organizations utilize and expand their knowledge on sustainable materials and technology. For example, they both emphasize on using natural materials, such as straw bale, adobe plaster, log timbers, and much more. One of the benefits of using natural materials to construct the walls, foundation, and roof is that it creates a well-insulated house, which results in lowering the cost for long-term heating and cooling. Another important attribute that they both share is that Red Feather and HTPI acquired their design(s) through their own gained knowledge and design charrettes that occurred with the Hopi community. These are a few commonalities that they uniquely share with each other, however they also have similarities with HTHA.

Red Feather and HTPI are providing an alternative housing option for the Hopi community that wasn't available 13 years ago. This is a remarkable change and housing opportunity for the Hopi community. Of course, both organizations want to offer the best service they possibly can; however, they do share a couple of operational patterns with HTHA. Their common patterns are: (1) They offer design options to the homeowner but it is limited, and (2) they cater to the low-income family group. HTHA still has plenty of

room for growth but through constant concerns and awareness of how HTHA operates the alternative housing organizations try their best to operate on a different spectrum than HTHA. However, the common patterns that the housing organizations share do aid in the success of a build but they also provide an awareness on what needs improvement.

The first pattern can be recognized by each housing organization's pre-existing floor plan(s) and design(s). They propose their own unique set of drawings for the homeowners to evaluate and offer some room for design discussion. However, the pre-existing drawings create limited opportunities for design explorations and changes that the homeowners can make. This becomes an upsetting fact to many homeowners and they often question why they are unable to design their own house. Unfortunately, this question has gone unanswered for many years. Until in 2016, an individual from one of these organizations finally provided an answer. Respecting their wish, I will not be inserting their interview transcription. However, their explanation can reflect the reasoning of why all three housing programs limit their option to several floorplans and aesthetics: (1) Any substantial changes attempted can alter their process resulting in more time and money, (2) minimum changes allows them to stick with what they know resulting in the capability to pass down knowledge confidently, and (3) attempts to incorporate the homeowner's cultural design input could result in more services that they aren't able to provide. This results in fewer errors and keeps the construction on schedule. However, at the same time, these methods prevent any further advancement of cultural embodiment in architecture. Each group tries to emphasize on the cultural aspects but their solutions are usually the same. The top three cultural implementations that all three groups do is placing an east-facing door, having a large family space, and some sort of

2D symbol(s) to quickly compensate, if needed. Of course, as time passes, new techniques are learned and the efforts to improve the design options and the homeowner's design input is always evolving.

The second pattern that all organizations share is that they target the same focal group as HTHA, which is the low-income families. There is nothing wrong with having low-income as a focal group because the list for low-income housing assistance is, unfortunately, still very long. However, there are multiple individuals who fall outside that group range who need housing as well. (Fig.39) With all the organizations, sadly, denying their services to the median-income individuals, this results in them also being houseless which also leads to the continuing of overcrowding in the house. There are a number of other known resources off the Hopi Reservation who could possibly provide affordable services, however, the median-income individuals are largely unaware of these resources. There is a lack of education around the housing resources that are available off the reservation. This provokes three different outcomes, each more desperate than the

Figure 39. Do you qualify for Low Income housing? You must fall below the Low (80%) Income Limits of the area median family income based on the US Department of Housing and Urban Development (HUD) criteria.

Source: "Hopi Tutskwa Sustainable Homeownership Program," Digital image. *Hopi Tutskwa Permaculture Institute*, accessed August 22, 2017, https://www.hopitutskwa.org/sustainable-homeownership-program.

last: (1) constructing their own home with their own network, time, and money; (2) purchasing trailer homes, G-sheds, or any type of mobile home; and (3) accumulating the pressure to move off the Reservation just to find housing.

Everyone needs a house, everybody wants a house, and, if given the opportunity, everybody would like to design their own house. These two organizations are constantly working to improve their scope of knowledge and are always in search of new opportunities to assist those who are in need. With their continuous effort and the support of the community, the growth of both organization will only result in more helpful services that they can offer to the Hopi community. They also become a model that other tribal nations can follow to help improve the housing crisis in their own communities.

3.1.4 Transition Homes – Trailer Homes and G-Sheds

The never-ending waitlist for affordable housing means there is a need for alternative housing options off the Hopi Reservation. The wait list for all the Hopi housing organizations is extensive and it takes time, money, and labor to construct a house for everyone. Therefore, a lot of Hopi individuals are utilizing the extended mobile services, such as Clayton Homes who provide manufactured homes and Graceland Portable Building with their sheds that would serve as a house, office, or storage. Driving through the Hopi Reservation, a lot of trailer homes can be seen along Arizona route 264. In order to portray the wide variety of housing types on the Hopi Reservation, a count of the various housing types was made. However, the house count survey was only within the Polacca border. The east boundary of the housing count survey extended to Sand Clan Subdivision and the west boundary ended at the cluster of trailer homes that sit just

before the airport road. The amount of trailer homes was totaled at 124, this number also includes the abandoned trailers. From the information gathered, trailer homes are the second highest housing type in the Polacca area. While the count for custom houses trails behind with 114. This total number also includes the abandoned custom houses. These abandoned houses are only missing the roof. HUD leads the housing type with 176, not including the houses at Walpi Housing and First Mesa Housing communities. As for the Graceland's sheds, their numbers are also high with a total count of 46. (Fig.40) With it being easily accessed and transported, those numbers will continue to grow higher.

Figure 40. Map of housing types in Polacca, AZ.
Source: BriAnn Laban

Through this section I will first discuss the manufactured homes, also known as trailer homes, followed by discussing Graceland Portable Buildings, also known as G-sheds.

Similar to HTHA, the trailer homes have worked over the years to improve the type of quality home they offer. Throughout the past it is unclear of who the Hopi people collaborated with to obtain their trailer home, but now there is well-known partnership with Clayton Homes. Clayton Homes has been building homes since 1956. Their mission is:

> To open doors to a better life and help families build happiness through homeownership. Since handing the first home key to our first customer in 1956, we have been proud of our dedication to innovation and providing affordable, quality-built homes across America… We believe that everyone should have the chance to pursue homeownership.[124]

Clayton Homes work with HTHA's Mortgage Buy-Down Assistance program to help make their manufactured home affordable to the Hopi people. The Mortgage Buy-Down Assistance is a program that:

> Allocate a portion of its Grant Funds to assist Low Income Hopi Tribal Members with Mortgage buy down assistance up to a maximum level of $25,000.00 in accordance with the HTHA Board approved Mortgage Buy-Down Program Policy. This program is to assist with the lowering of monthly payments for approved mortgage loans for individually financed homes.[125]

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[124] "About Clayton," *Clayton,* accessed August 24, 2017, https://www.claytonhomes.com/why-clayton.
[125] "Programs," *Hopi Tribal Housing Authority*, accessed September 12, 2016, https://www.htha.org/programs.

This is a one-time assistance program and is limited to families who fall within their parameters of low-income base. Clayton Homes works with HTHA in the application process by helping to inform the applicants of what is needed to get approved. During the 2017 Housing Fair, the company provided the information on the next steps after filing the general application of interest. They gave a list of items that applicants must return in order to move forward with the loan approval process. Those items include: (1) Last two paystubs for each applicant, (2) Identification, (3) Copy of Home Site Lease Document, (4) Copy of CIB/Tribal ID for Tax Exemption Purposes, and (5) Location map of Home site. At the Housing Fair, they brought the model "Breeze I" (Fig.41), a manufactured home to display and provoked interest in the Hopi people. The transition from the older models of trailer homes to Clayton Homes model is evident that there is an effort to improve and redefine the standards of a trailer home.

Figure 41. "Breeze I" model provided by Clayton Homes.

Source: "SSP-16723A Breeze I," Digital image. *Clayton*, accessed August 22, 2017, https://www.claytonhomes.com/homes/51SSP16723AH.

With the Clayton Homes, there is no need for professionalism from architects and contractor dealing with the clients, which then eliminates the design and construction process. There are already set floorplans to follow

Figure 42. Example of set floorplan, Breeze I and Breeze II.

Source: "SSP-16723A Breeze I," and "Digital image. *Clayton*, accessed August 22, 2017, https://www.claytonhomes.com/homes/51SSP16723AH.

which makes the manufacturing process a lot quicker. (Fig.42) The time between manufacturing and the time of delivery varies because of backlog and distance. What could easily take 2-7 days to construct, depending on the model, could end up taking five weeks to start because of the high demand of orders.[126] In a sense, there is another waitlist to be put on. However, this wait is a lot shorter than the wait for the other programs. Once the house is built and is ready for delivery, then it depends on how long the distance is between the manufacturer and the site. Of course, there is the possibility of the mobile home being in-stock, which lessens the wait time exponentially.

Similarly, the popularity of the Graceland Portable Building structures, or G-sheds, is gradually increasing on the Hopi Reservation with each passing year. Graceland Portable Buildings has even adapted their national advertisement with the inclusion of the line, "A Great Reputation on Tribal Lands." (Fig. 43). G-sheds, offer a variety of different sheds and cabin-like buildings all across the country. Their mission and values is stated:

> In order to be a successful business we must always remember that a consistent high level of performance of the business is necessary to maintain the confidence of our valued

Figure 43. G-Shed Lofted Barn Cabin.
Source: "Need More Space, Storage or Shelter?" Digital image. *Willams-Grand Canyon News*, accessed September 25, 2017, http://www.flyerboard.com/view/graceland portablebuildings/4211/262901.html.

[126] "How Long Does it Take to Build a Manufactured Home?" *Clayton Blog,* accessed August 24, 2017, http://blog.claytonhomes.com/how-long-does-it-take-to-build-a-manufactured-modular-home.

> customers, while providing the very best built portable building that money can buy (the best in the industry). "LOOK FOR THE G" for Quality and Affordability![127]

They are committed to providing quality service and a hassle-free process to their clients. The client needs vary widely; therefore, Graceland produced a variety of structures that can address those needs which includes small business office space, storage space, and getaway cabins.[128] They offer a Rent-To-Own service and they help the clients work toward complete ownership. The most popular shed that is seen around the Hopi Reservation is the lofted barn cabin that Graceland offers. The shed is kept to its wooden color to display the simplicity of the design and structure. The structural system is a light weight wood frame with a 5/8" treated floor system finished with 5/8" T1-11 pressure treated siding and an aluminum roof.[129]

The small size is a feature that stands out and it reminds some people of the tiny homes that they see on television. Being a prefabricated shelter, the structure is easily transported to the site. Graceland offer free deliver up to the first 50 miles, free setup and leveling, and free anchoring if needed. After the first 50 miles, there is an additional cost that varies between regions and states.[130] The transportation is similar to mobile trailers but eliminating the need to be connected to the water and electrical line. Because of this, most shed are usually located next to their family/parent's house. Another reason is that

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[127] "Mission and Values," *Graceland Portable Buildings*, accessed August 24, 2017, http://www.gracelandportablebuildings.com/version2/mission-values.html.
[128] "Our History," *Graceland Portable Buildings*, accessed August 24, 2017, http://www.gracelandportablebuildings.com/version2/our-history.html.
[129] "Lofted Barn Cabin," *Graceland Portable Buildings*, accessed August 24, 2017, http://www.gracelandportablebuildings.com/version2/lofted-barn-cabin.html.
[130] "FAQ," *Graceland Portable Buildings*, accessed August 24, 2017, http://www.gracelandportablebuildings.com/version2/faqs.html.

there is no available land within their clan to place their shed on, resulting in having the shed next to the main house.

Renae Lacapa is a young Tewa adult woman and is from the village of Tewa. She is currently an owner of a G-shed and she has transformed it into a living space. Renae's story is a common tale of how adults who are seeking privacy among their large family are acquiring G-sheds as a housing alternative. Renae begins her story by expressing the growth of her family and the limited living space within the family house. With the expansion of her family, Renae and her partner were looking for a more convenient living arrangement for their family. She shares:

> *Within that two years, I ended up having my second son. We knew that with the two boys the living situation would be challenging with everyone. We were trying to think of ways of how we can house both of them. With the G-shed, that was our fastest solution of having something to live in. However, we think about it now and it wasn't really a good idea because we had to put a lot of money into insulating it, drywalling it, and getting the flooring done. It's also the payments, well they're not really expensive and it's affordable, we pay a little bit over 300 a month. We have had it for 2 years now, since summer, and it's pretty much all insulated and drywalled now. It's nice because we wanted it for our own privacy, especially since everybody else is here, in the family house. You want your privacy and that's the reason why we got that. It's nice and all but we're still in the process of trying to get electricity hooked up in it, as well as plumbing. Other than that, it's somewhat livable for now. It's something that the boys like too because with their sister they feud and everything. With the G-shed, they are able*

to get away from her and everybody else and it's the same with us. With everybody else here we are able to have our own space. And within the year, after a year's worth of payments, we'll try to add on to it.[131]

G-sheds provide the opportunity as an instant shelter and a transition home for those who are waiting for HTHA, Red Feather, or Hopi Tutskwa, providing them with their own private space in the meantime. There are still mix feelings from the Hopi people about these structures, but some voiced their curiosity and provoke the question of how efficient and reliable the sheds really are. Over time we shall see if these sheds are reliable and if they will be used for transition homes or if they eventually become a permanent housing solution for others.

Clayton Homes and Graceland Portable Building are businesses who strive to serve their customers as best as they can. Providing services that can lead to a permanent home or act as a transition home. Of course, these two distinct types of businesses don't only accommodate to the Hopi people, their client base is spread throughout the U.S. This means their intention is to make models appropriate for everyone, which means they are not at all culturally appropriate for Hopi people.

Now, it hasn't happened yet but there is talk about purchasing and using tiny homes as a housing solution. They are smaller than a trailer and they are completely furbished with insulation and cooking, electric and plumbing needs, unlike the G-sheds. If the need for housing continues and, based on the actions that have been taken so far to combat the housing shortage, the possibility of seeing tiny homes on the Hopi

[131] Renae Lacapa, interview by BriAnn Laban, Hopi Reservation, November 2016.

Reservation will most likely occur in the near future. Therefore, these models will offer a permanent or temporary home environment for the Hopi community but they will continue to lack the cultural needs that are necessary for a Hopi home.

3.1.5 Case Studies

The conclusion of this chapter highlights case studies which exemplify how Indigenous culture can be implemented in tribal housing. Each case study is a collaboration with a tribal member and a design group/architect. Each project had a different approach in representing each client's culture. The level of cultural emphasis varies, but the intention can be seen even if it wasn't conscious. The case studies that will be presented are the Windcatcher house designed by DesignBuildBLUFF, Rina Swentzell's adobe house designed by Rina Swentzell, and the Hopi Tutskwa Permaculture housing project. The information from each case study shows how different individuals in rural areas have approached the housing epidemic without a "cookie cutter" design.

DesignBuildBLUFF is a graduate architecture program at the University of Utah "focused on immersing students in hands-on cross-cultural experiences."[132] Partnering with the Navajo community of San Juan County, DesignBuildBLUFF is able to work with individual families to create innovative sustainable house design solutions. The Windcatcher house is one of the many projects that they completed in 2010. I discuss this particular project for its emphasis on using earthen materials around them, as well as the harsh desert climate, which inspired their design. For the Windcatcher house, the

[132] "Who We Are," *DesignBuildBLUFF*, accessed September 18, 2016, http://www.designbuildbluff.org/.

University of Utah and graduate architecture program DesignBuildBLUFF collaborated with the Begay family to create a unique 1,100 square foot, 2-bedroom home.[133] The site is located on the Navajo Reservation in Utah. The design intent was to create "a balance, or more, a symbiosis with the surrounding environment, it was contemplated to protect the home from the harsh desert climate, while at the same time utilizing the beneficial attributes of the natural elements to maintain a comfortable micro-climate"[134] Their design intent resulted in the focal point of their design, the central hearth, or Windcatcher. The students of DesignBuildBLUFF explains, "The hearth naturally acts as both the primary cooling and heating source for the home, employing passive evaporative cooling through a drip-line dampened blanket-like medium at the upper openings on all four sides within the tower, and the wood stove at its base."[135] This tower extrudes up from the ground at a height of 30 feet, becoming a notable feature of the house and within the landscape.

As stated above, the design intent was to protect the home from the harsh climate's hot days and cold nights. This housing design found a creative way to address this concern with the climate. The desert environment can become unbearable at times and the strong desert wind can force its way to penetrate through any openings, even the openings that are hard to see. Therefore, to work with these conditions, the students decided on rammed earth as one of their building materials. The massive walls were to act as protection against the wind, act as a heating and cooling system by thermal mass,

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[133] Bridgette Meinhold, "Off-Grid Rammed Earth House on Navajo Nation Catches the Wind," *Inhabitat*, February 4, 2011. Accessed September 18, 2016, https://inhabitat.com/off-grid-rammed-earth-house-on-navajo-nation-catches-the-wind/.
[134] "Windcatcher: Inspired by the Wind, Shaped by the Heart," *DesignBuildBLUFF*, accessed September 18, 2016, http://www.designbuildbluff.org/index.php/project_page/work-2010-windcatcher/.
[135] Ibid.

and bringing forth that earthly aesthetic. This design strategy allowed the house to be built with the surrounding resources which minimized the housing energy consumption. Aesthetically the red rammed earth walls display a reconnection back within the landscape. Overall, creating a visual performance with the environment.

The design approach was innovative and incorporated a lot of modern materials and aesthetics however, this project is an Indigenous house example that evokes the idea of having deeper meaning. Even though the cultural element may not have been an inspiring factor for this project, and it was more so for the aesthetic and protection from the elements, there is possibility for deeper meaning. The design intent of working with earth and having it reconnect with the land is an attempt to implement culture into the design. We live in connection with the earth and for this project the aesthetic look of the rammed earth walls is the visual connection between the habitant and the land. Going back to their design intent of creating a balance, or symbiosis, with the environment. They may have utilized on energy efficient technology, technology that allows them to be off-the-gird, but the synergy between natural and man-made technology allows the Begay family to live in both worlds.

Figure 44. Windcatcher House completion photo. Begay and DesignBuildBLUFF instructors and students.

Source: "Off-Grid Rammed Earth House on Navajo Nation Catches the Wind," Digital image. *Inhabitat,* accessed September 18, 2016, https://inhabitat.com/off-grid-rammed-earth-house-on-navajo-nation-catches-the-wind/)

Figure 45. Two 24-inch thick by eight-foot tall rammed earth walls sit on the south and west sides of the house. "The longer stretching east-west, and the other enclosing the kitchen north-south."

Figure 46. "30 foot wind tower." The 30 foot wind tower is the most striking feature of the home and is the key design inspiration for this project.

Figure 47. Sunset picture

Source: "Windcatcher: Inspired by the Wind, Shaped by the Heart," Digital image. *DesignBuildBLUFF*, accessed September 18, 2016, http://www.designbuildbluff.org/index.php/project_page/work-2010-windcatcher/.

Figure 48. Windcatcher House main entrance.

Figure 49. Central hearth, or Windcatcher, to provide heating and cooling.

Figure 50. Kitchen's 24-inch thick rammed earth wall.

Source: "Windcatcher: Inspired by the Wind, Shaped by the Heart," Digital image. *DesignBuildBLUFF*, accessed September 18, 2016, http://www.designbuildbluff.org/index.php/project_page/work-2010-windcatcher/.

Rina Swentzell of Santa Clara Pueblo grew up in her traditional community, which helped shaped her passion for her culture. Rina eventually left Santa Clara to pursue higher education studying in architecture and American studies. During her time away, she gained knowledge and experience as a writer, teacher, and lecturer, eventually returning home and coming full circle with her life's journey. When she returned home, she started considering building her own house. During her academic journey she realized the HUD projects were having a disconnecting effect on the Reservation. She said, "How do you relate to something that's cookie-cutter made? It destroys the sense of connection and community, of belonging."[136] This realization, her work studying architectural history of Santa Clara Pueblo, and other factors were her reasons for motivation around designing and building her own home.

Rina Swentzell's adobe house was constructed in 2009-2012 at her home in Santa Clara Pueblo. After working so hard away from home she sought out to create a contemporary pueblo style house back on her Reservation. Living in two worlds, traditional and modern, Rina saw the importance to incorporate modern materials and techniques to better improve the home's construction and maintenance. She used concrete flooring instead of mud floors, a metal roof instead of a traditional flat roof, she clad in rigid foam insulation on the north and west wall to combat against the winter cold and summer heat, and an in-slab hydronic heat system.[137] Even though she added modern techniques and materials, her design inspiration was to incorporate as much of her cultural connections to the house for she has a strong connection to her culture. For this

[136] Charles C. Poling, "A Healing Act: Rina Swentzell," *Homing Instinct*, October 03, 2012, accessed May 02, 2016, https://casasaga.wordpress.com/2012/10/03/a-healing-act-rina-swentzell/.
[137] Ibid.

would give her a "sense of belonging." Rina provided a reflection of her experience:

> There's a sense that I've literally come back to a place of belonging…And nearby, on the hill there there's a ruin. Pottery and stone tools used by people a thousand years ago flow down onto the place. Here I can touch who my people have been forever. Building this house keeps that alive. It gives me an incredible sense of belonging. It's that whole feeling of relatedness, like in the old days when you would remember mixing that mud, making those adobes, hauling those logs down from the mountain, and who was there, and who got mad. That's how it was making this house.[138]

The physical attributes that illustrated the "sense of belonging" were provided by the circular, curved walls. The overall house shape was rectangular, but the inside was divided by curving walls which created a balance between the angular and the curved. Rina Swentzell states, "The circular form is very much an old Pueblo idea. It comes from all the kivas and towers. There's a wonderful feeling of containment in a circle that you don't get in a rectangle, the sense of embracing." [139] The building materials were also inspired from her Pueblo roots and gave that "sense of belonging". The wood was local, the adobe was local, and the clay and sand for plastering was local. The use of her home materials displayed a simple yet elegant aesthetic similar to the traditional Pueblo architecture.

With the help of her family, Rina was able to design and build her home. She shares:

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[138] Ibid.
[139] Ibid.

> I knew we had so much talent in the family…This family has an attitude of, 'Yeah, we need that, and we can do that. Where do we start?' - and without much ado. It's happening. That's the miracle of this house. It's all been done by family, especially my grandkids.[140]

Together, Rina and her family designed and built her home. Through this process, she was able to teach them and learn alongside her family about how to properly build and maintain an adobe style home. She handed down her knowledge to her children and grandchildren who will take care of her home when she no longer can. Overall, a review written by The Canelo Project describes Rina's home, "As a whole, the little adobe house is beautiful work of art and yet at the same time, ever so practical and functional."[141]

[140] Ibid.
[141] Bill Steen, and Athena Steen. "Rina Swentzell House." *The Canelo Chronicles*. Accessed May 02, 2016. http://www.caneloproject.com/projects/building-project/rina-swentzell-house/.

Figure 51. Rina Swentzell's contemporary pueblo adobe house.

Figure 52. Circular form creating a "sense of embracing."

Source: Bill Steen, "Upcoming New Mexico Magazine Article – Athena's Mother's Adobe House," *The Canelo Chronicles*, June 07, 2011, accessed May 02, 2016, http://www.caneloproject.com/upcoming-new-mexico-magazine-article-athenas-mothers-adobe-house/.

Figure 53. Rina and family members work together plastering the interior space.

Figure 54. South facing windows for passive solar.

Figure 55. Looking towards the front door and built-in dining area.

Figure 56. Looking out from the south facing windows.

Figure 57. Kitchen, a modern commodity with a southwest aesthetic.

Source: Bill Steen, "Upcoming New Mexico Magazine Article – Athena's Mother's Adobe House," *The Canelo Chronicles*, June 07, 2011, accessed May 02, 2016, http://www.caneloproject.com/upcoming-new-mexico-magazine-article-athenas-mothers-adobe-house/.

The Hopi Tutskwa Permaculture Natural Building Internship Program is in their fourth year of operation. They were able to successfully complete a home in 2015 in Kykotsmovi, AZ, another home in 2016 in the village of Shongopovi, and their third home in 2017 in Hotevilla. This program was created to provide an educational opportunity to not only the ten interns but to the community at large. The organization emphasizes on community involvement and teaching of traditional and Western knowledge. Emphasizing on looking back on the Hopi traditions, the organization uses traditional Hopi construction techniques and use of earthen materials to construct the home. At the same time looking at modern solutions to provide and implement energy efficient and passive solar strategies into the design. Through this program the youth and the adults are educated on the importance in using earthen materials and sustainability to design a home on the Hopi Reservation.

I was able to visit the home at Shongopovi, which was complete in 2016, and participated in the process of quarrying the stone for the next upcoming project. Jacobo Marcus, program director, and Kurt Outie, program assistant, were the two individuals who gave me a tour of the house. The cultural elements that were implemented were more so in the process not so much in the design. The design and design approach is definitely different from the other housing programs (HTHA and Red Feather) that are available on the Hopi Reservation. Their main process is through the student internship which is vital to their success for they are the ones who work to gather the materials, to setting the foundation, to constructing the framework, to constructing the roof, to infilling the walls with straw bale and cob, to finishing the walls and earthen floor, to finally preparing for open house. The students may not have any experience with construction,

working with earth or straw bale, or even quarrying but with hard work and effort they are able to build a home from their two hands and teamwork. That philosophy is what the program is instilling in the student interns. It is a Hopi philosophy that is not being taught as much because of the modern distractions and laziness. Quarrying takes hard work, lifting the wood beams takes teamwork, and infilling the walls with natural materials takes patients and practice. They are taught how things work and how things are put together and, with the guidance of instructors, they are able to put their teachings into practice. This creates a stronger bond to the knowledge that was handed down to them. In terms of the design, there were some cultural elements, such as using sandstone as part of the foundation, which can also have a deeper meaning of reconnecting us to the earth, having sandstone veneer for aesthetic purposes, having an east-facing door, 2D symbols of the occupant's clans, and a large family gathering space.

Figure 58. Quarrying – Step one: Separate a manageable size of stone from a larger stone.

Figure 59. Quarrying – Step two: Start breaking pieces off roughly 12x6 or larger size stones from the manageable size stone.

Figure 60. Quarrying – Step three: Start shaping stone into a brick shape. Can also be done on site.

Figure 61. Quarrying – Step four – Gather and transport all usable stone.

Source: BriAnn Laban

Figure 62. Two student interns working on constructing the interior wall base with sandstone.

Source: "Natural Building," Digital image. *Hopi Tutskwa Permaculture Institute*, accessed May 02, 2016, https://www.hopitutskwa.org/)

Figure 63. Working together as a team to lift and place wood beams (Lestavi).

Figure 64. Student intern working on the interior cob wall.

Figure 65. Straw bale is the material used for the exterior walls.

Figure 66. Working on completing the interior cob walls.

Figure 67. Walls are completed and now student interns work on completing the earthen floor.

Source: "Hopi Tutskwa Permaculture: Natural Building Internship Program," Digital image. *Hopi Tutskwa Permaculture Facebook*, accessed May 02, 2017, https://www.facebook.com/pg/htpbuild/photos/?ref=page_internal.

Figure 68. View when walking in from the greenhouse entrance.

Figure 69. 2D symbols representing the occupant's clans.

Figure 70. East-facing doors. Far left door enters the green house while the right door enters the home.

Figure 71. Utilizing on sustainable technology by incorporating solar panels and solar water heater. Both located on the roof.

Figure 72. Hopi Tutskwa Permaculture Institute 2016 completed project. Working with earthen materials and incorporating sustainable features, such as solar panels, solar water heater, water catchment, and a greenhouse.

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Source: BriAnn Laban

CHAPTER 4. WHAT IS CULTURE

4.1 Introduction

"Culture encompasses religion, food, what we wear, how we wear it, our language, marriage, music, what we believe is right or wrong, how we sit at the table, how we greet visitors, how we behave with loved ones, and a million other things." – Cristina De Rossi, an anthropologist at Barnet and Southgate College in London

Usually a research question is developed to respond to a need that isn't explored well enough within the academic realm and within the greater community. The purpose of the research is to show that there is a knowledge gap that hasn't been filled yet.

[142] What is the knowledge gap within Indigenous architecture? There are multiple knowledge gaps within Indigenous architecture but for the scope of this dissertation and this chapter there are two. The first knowledge gap is that there isn't an understanding of an Indigenous perspective on culture and architecture. There are a few resources discussing traditional Hopi architecture and Hopi culture; there are fewer written text about the two together. Peter Nabokov and Robert Easton touch a little bit on this subject of culture and architecture in their book, *Native American Architecture,* but the cultural element is mainly focused on the sacred spaces of the Hopi. Secondly, there isn't any text about Indigenous architecture, specifically Hopi architecture, beyond the historical or preservation scope in architecture. Indigenous architecture is often thought of as traditional or static. The other times we see attention paid to Indigenous architecture is when ancient structures need to be preserved. However, there is more to it than aesthetic and religious components that are written about in books. Fortunately, the lack of a

[142] Margaret Kovach, *Indigenous Methodologies: Characteristics, Conversations and Contexts* (Toronto, ON: University of Toronto Press, 2009), Chapter 6, Kindle edition.

definition leaves room for setting a standard that can help define what Indigenous architecture can be.

Before we get into setting a standard for Indigenous architecture, we must first focus on what culture is through an Indigenous perspective. Culture, like sustainability, is a broad term that has collected multiple meanings overtime but what we do know is that it is needed within the realm of Indigenous architecture, specifically tribal housing. The presence of culture helps with the understanding of how one lives, not in a sense of surviving, but how they view the world around them. Today, most Hopi and Tewa tribal members live in two worlds but the architecture on the Hopi Reservation does not reflect both worlds. It is in favor of and highly reflective of the Western world. If Indigenous architecture was to incorporate the Indigenous culture and Western culture into the design, it would move toward redistributing the balance between the two worlds. Of course, there is some sacred knowledge that cannot be shared; however, the following information will not compromise the integrity of the Hopi and Tewa people.

4.2 Systematic View on Culture: The Outsider Looking In

Indigenous culture was largely disregarded by colonial forces. If by any chance someone found interest in culture, they had to study and talk about the "things people could or would talk to them about, with the result that many of the important things – culture patterns that make life meaningful and really differentiate one group from another – have gone unnoticed or been unreported and brushed aside as trivial."[143] Unfortunately, one of those driving factors was the idea and assumption that Indigenous cultures would

[143] Edward T. Hall, *Beyond Culture* (New York, NY: Anchor Book/Doubleday, 1976), 14

disappear. In order to counter or save those disappearing cultures, anthropologist and historians have, in their own way, froze many "Natives in time and assign[ed] to them the status of 'Other' that makes them objects of study."[144] This is the thinking that contributed to how Indigenous culture is viewed in academia despite the stereotypical and damaging outcome.

Despite the lack of an Indigenous perspective, there are many who continue on this journey to define the essence of culture. When we read about Indigenous cultures we learn about their kinship practice, what group their language belongs to, their history, sacred spaces, traditional housing types, and any other subject matter that scholars were able to turn into a systematic method. Some scholars including Lewis Henry Morgan, the father of American anthropology, studied American Indian cultures by observing, documenting, and establishing a systematic study of the kinship system and house types. Clark Wissler approached culture as a materialist creating a list of physical objects and using those objects to define culture traits. Clifford Geertz chose to examine culture with his semiotic "webs of meaning."[145] Regardless, as time progresses, the anthropological way of thinking, and scholars alike, have changed and evolved.

Now we live in a world that is influenced by not one but many cultures. It has become apparent that cultures are not fixed in time. Cultures do change and are influenced by many things. The word "culture" is becoming dangerously overused so that it has multiple descriptions and meanings, which can be disorienting to the point where the term becomes useless. Some examples include: Western culture, Eastern culture,

[144] Clara Sue Kidwell, Homer Noley, and George E. Tinker, *A Native American Theology* (Maryknoll, NY: Orbis Books, 2001), 94.
[145] Kidwell, 86.

Latin culture, American culture, pop culture, art culture, food culture, tech culture, and the list goes on and on. Critics, like Raymond Williams, describe culture as having three diverse meanings: one being a process of individual enrichment (such as saying one is cultured); the other being a group's particular way of life (such as French culture), and finally used as an activity (such as culture displayed in museums, books, or concerts).[146] Each description is widely different from one another and yet they each aim towards the theme of identity.

Western culture influenced many Indigenous cultures, in particular technology and the technological lifestyle found today. Charlie Gilkey wrote in their article, *Technology and Culture Influence Each Other,* published by Productive Flourishing:

> We also have to consider the ways in which technology either influences or creates culture. The technology that powered the industrial revolution created the industrial society. The mass production of automobiles created a culture of commuters, vacationers, and the suburbs. Radio created a culture of listeners and spawned jazz, big band, and fireside chats. Television created the culture of Hollywood, MTV, always-on news, and reality TV shows. The Internet is creating a culture that's changing so fast that I'm afraid to give examples that may be dated by the time you read this. As much as technology is created from the fabric of our culture, technology also creates the fabric of our culture.[147]

Technology has become our way of life in the Hopi community, but it has also separated

[146] Joshua Rothman, "The Meaning of Culture," *The New Yorker*, last modified December 26, 2014, https://www.newyorker.com/books/joshua-rothman/meaning-culture.
[147] Charlie Gilkey, "Technology and Culture Influence Each Other," *Productive Flourishing*, last modified April 21, 2015, http://www.productiveflourishing.com/technology-and-culture-influence-each-other/.

us from who we are as Hopi people, as Indigenous people. Within Hopi, one will find cars, computers, smart appliances, and treadmills, just as in the urban realm. Technology serves to disconnect people from nature. In the words of Edward Hall:

> We in the West are alienated from ourselves and from nature. We labor under a number of delusions, one of which is that life makes sense; i.e., that we are sane. We persist in this view despite massive evidence to the contrary. We live fragmented, compartmentalized lives in which contradictions are carefully sealed off from each other.[148]

The result of this is also articulated by Arthur Versluis in *Sacred Earth; The Spiritual Landscape of Native American*, "We are hardened, dead to our world. We do not see what is quite literally before our very eyes. The Sun, the Wind, the Eight directions, the Waters, these have no spiritual meaning. They, like us, are merely objects".[149] He took a description of the Iron Age to describe the present time in the 1990s. The negative effects of industrialization, are echoed within contemporary Indigenous communities.

Culture has now become a term full of meaning but simultaneously a word of emptiness. Similar to the term sustainability, it is an innovative word that many thought was a great concept, and it still is but now it has been overused to the point that no one really understands what sustainability is. The term "culture" is a word that many scholars are struggling to define. Culture is viewed like a target and everyone is trying to hit the bull's eye, when it's more like a wheel with many spokes (Fig. 73 & 74). While there remain

[148] Edward T. Hall, *Beyond Cultures* (New York, NY: Anchor Books, 1976), 11.
[149] Arthur Versluis, *Sacred Earth: The Spiritual Landscape of Native America* (Rochester, VT: Inner Traditions International, 1992), 92.

Figure 73. Cultural target: everyone is trying to hit the bullseye.
Source: BriAnn Laban

Figure 74. Cultural wheel: everyone is working together towards a common goal
Source: BriAnn Laban

many perspectives, what is central to the argument here is to be aware of etic viewpoints in defining culture; in other words, the outsider looking in and seeking a generalizable premise. A preferred method for examining the intersection of Hopi culture and architecture is the emic standpoint, or possessing the ability to explain and understand custom, behavior, and belief systems from the inside.

4.3 Indigenous Perspective on Culture: Finding A Common Ground

Even though many different perspectives have explored the concept of culture, there is still a lack of an Indigenous perspective. Indigenous cultures have been defined, categorized, stereotyped, and relegated to simple aesthetics, ceremonial practices, family structure, language structure, and other topics that fall within the paradigm of "Native culture." Scholars continue to challenge these interpretations, noting that the perspectives do not capture the Indigenous voice.[150] Many Indigenous and non-Indigenous scholars have now voiced their knowledge of Indigenous culture, and are beginning to define culture in their own terms such as: cultural identity ("feeling of belonging to a group"[151]), cultural practice ("objects, events, activities, social groupings and language that participants use, produce and reproduce in the context of making meaning in everyday life"[152]), cultural knowledge ("all we know that characterize a particular culture"[153]), and cultural heritage ("expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values"[154]). While these terminologies may fall with the scholastic parameters, an Indigenous perspective on culture has and will always be a

[150] David S. Edmunds, Ryan Shelby, Angela James, Lenora Steele, Michelle Baker, Yael Valerie Perez, and Kim TallBear, "Tribal Housing, Codesign, and Cultural Sovereignty," *Science, Technology, & Human Values* 38, no.6 (2013): 801-828, doi: 10.1177/0162243913490812.
[151] "What is a Cultural Identity?" *NoBullying - Bullying & CyberBullying Resources*, last modified November 20, 2016, https://nobullying.com/cultural-identity/.
[152] "What is Cultural Practice," *IGI Global*, accessed September 26, 2017, https://www.igi-global.com/dictionary/cultural-practice/6412.
[153] Olivia Hernández-Pozas, "What is cultural knowledge and how can we use it?" *Olivia Hernández-Pozas*, last modified August 7, 2013, http://www.oliviahdzp.com/2013/08/07/what-is-cultural-knowledge-and-how-can-we-use-it/.
[154] "What is Cultural Heritage," *Culture in Development*, accessed September 26, 2017, http://www.cultureindevelopment.nl/cultural_heritage/what_is_cultural_heritage.

holistic, oral, and deep-rooted representation rather an analytical, reductionist, and literate observation. It will continue to challenge scholars to go beyond the scientific scope of culture, specifically the categorization and organization of Indigenous cultures.

When focusing on the incorporation of culture into the design of Indigenous architecture, it is useful to provide a definition to help progress the idea of Indigenous architecture. Ramona Sakiestewa summarizes the importance of implementing culture into architecture:

> A culturally adapted architecture is not merely a matter of visual style but of integration of culture, behavior, and environment. To deny cultural differentiation is foolish. A culturally specific character or style cannot be consciously learned and added on the surface of design; it is a result of being profoundly subject to a specific pattern of culture and of the creative synthesis which fuses conscious intentions and unconscious conditioning, memories, and experiences in a dialogue between the individual and the collective.[155]

The aim of this dissertation is to integrate a Hopi perspective into Hopi tribal housing. The challenge is to articulate culture from the Indigenous viewpoint while trying to maintain scientific and academic integrity. Fortunately, many scholars, like Larry Kimura, overcame this obstacle by providing a link between the two. Kimura discusses the idea that culture has two levels called base culture and aesthetic culture. He describes base culture as the "daily lifestyle, values, and personality of a people" and aesthetic

[155] Juhani Pallasma, "Tradition and Modernity: The Feasibility of Regional Architecture in Post-Modern Society," in *Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition*, ed. Vincent B. Canizaro (New York: Princeton Architectural Press, 2007), 132. http://fluxwurx.com/placemaking/wp-content/uploads/2011/03/pallasmaa_critical-positions.pdf.

culture as "ceremonies, philosophy and literature, building upon the base culture foundation and legitimizing it to the people."[156] Aesthetic culture is what most of the world views, studies, and publishes about Indigenous culture. Base culture is the voice that helps define the aesthetic culture but, in most cases, is dismissed from the dialogue. For the purposes of this dissertation, it is base culture as the Indigenous perspective, that is missing as a means to understand Hopi culture.

Before we get into how culture will be implemented into architecture, we must first express what culture means in an Indigenous perspective. We examine the question here, what is base culture in an Indigenous perspective? What is that tool that teaches us how to live? There are multiple elements that help define culture in an Indigenous perspective and they range from language, to community, to religion, to oral traditions, to the cosmos, to the earth, to science and technology. In writings about Indigenous culture and evident in Hopi interviews, there is a strong acknowledgement of the earth being interconnected with culture, the interconnectedness of living beings, and the role of stewardship within Indigenous culture.

Earth is sacred to many tribal nations and respecting the land is a value that is held strongly in one's heart. As the Indigenous architect, Johnpaul Jones states, "In the Native worldview, everything is alive, endowed with spirit or energy. Nature has something to teach us, not only through obviously animate things like plants and animals

[156] Larry Kimura, "Native Hawaiian Culture," in *Native Hawaiians Study Commission Report on the culture, needs and concerns of Native Hawaiians Pursuant to Public Law 95-565, Title III*, vol. 1 (June 23, 1983): 181, http://files.eric.ed.gov/fulltext/ED254608.pdf.

but also through rocks, mountains, rivers, and places large and small."[157] Cajete articulates this relationship through the notion of natural democracy:

> The first cosmologies were built with the perception that the spirit of the universe resided in the earth and things of the earth, including human beings. A people's understanding of the cycle of nature, behavior of animals, growth of plants, and interdependence of all things in nature determined their culture, that is ethics, morals, religious expression, politics, and economics. The people came to know and to express a 'natural democracy,' in which humans are related and interdependent with plants, animals, stones, water, clouds, and everything else.[158]

According to Kidwell and et al, Indigenous people are more sensitized to local conditions, as their lifestyle is based on the cyclical pattern, such as the hunting season and agricultural cycles; they are able to understand what happened in the past and what will happen again in the future.[159] Many tribes, such as the Hopi, live their lives in accordance to the cycle of nature. Cycles are a part of the repetitive cycle that allows them to sustain a lifestyle within a desert, forest, tundra, tropical, or plains landscape.

One of the ways the sacred connection with earth is learned is through oral traditions. Storytelling is one of the many bridges that connect us to our culture. However, many stories are not written, and therefore do not qualify as evidence of past events, lessons, or evidence of cultural traits. However, these stories are vital in that they

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[157] Jones, Johnpaul, "Remembering the Experience of Past Generations," in *The Land Has Memory: Indigenous Knowledge, Native Landscapes, and the National Museum of the American Indian*, ed. Duane Blue Spruce and Tanya Thrasher (Chapel Hill, NC: University of North Carolina Press, 2008).
[158] Gregory Cajete, "Philosophy of Native Science," in *Native Science: Natural Laws of Interdependence* (Santa Fe, N.M.: Clear Light Publishers, 2000), 46.
[159] Clara Sue Kidwell, Homer Noley, and George E. Tinker, *A Native American Theology* (Maryknoll, NY: Orbis Books, 2001), 94.

aid in the preservation and resistance of cultural loss. This is accomplished because story enables the language and voice, which enable access to culture. The importance of language was expressed by a Passamaquoddy elder; "The instructions are in the language. Learn the language, and you'll have everything you need to know, because it's all there. Our way of living is there in the language."[160] Kimura expresses the Hawaiian perspective of how powerful language is intertwined with place:

> Perhaps the reason that place names have such evocative power in the Hawaiian language is the emphasis on homeland or aloha ʻāina (love of land, patriotism, pride of place) in the culture. There are several words used to describe a person descended from generations of a family living in an individual location (kupa, kamaʻāina, papa, ʻōiwi) while English has only "native," which, rather than expressing pride, can carry negative connotations. To traditional Hawaiians, place names are considered kupa (natives) themselves. Place names are like esteemed grandparents linking people to their home, personal past, and their history.[161]

Leslie Marmon Silko, through personal story, articulated the power which language has on human beings. Language, expressed within our stories, "brings us together, despite great distances between cultures, despite great distances in time."[162]

> For example, a Hopi story that brings us together despite great distances in time

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[160] Gail Dana-Sacco, "The Indigenous Researcher as Individual and Collection: Building a Research Practice Ethic within the Context of Indigenous Languages," *The American Indian Quarterly* 34, no.1 (Winter 2010): , doi: 10.1353/aiq.0.0094.
[161] Larry Kimura, "Native Hawaiian Culture," in *Native Hawaiians Study Commission Report on the culture, needs and concerns of Native Hawaiians Pursuant to Public Law 95-565, Title III*, vol. 1 (June 23, 1983): 178, http://files.eric.ed.gov/fulltext/ED254608.pdf.
[162] Leslie Marmon Silko, *Yellow Woman and a Beauty of the Spirit* (New York, NY: Simon and Schuster, 1996), 59.

and culture and is intertwined with the land can be understood through the emergence story. The Hopi emergence story is one Hopi story that has been documented. It tells of how the Hopi people came to be in this world, the fourth world. This story communicates the connection that Hopi people have with the earth and the role they play in taking care of the land. In order to keep the story concise, this story is retold here in the author's version that has been given through oral traditions. A detailed version can be found in the *Book of the Hopi*, recorded by Frank Waters and Oswald White Bear Fredericks.

> *Upon emerging from the third world the people were greeted by Masauwu, the guardian of the fourth world, Tuwaqatsi. He welcomed everyone with the handshake of friendship. Once everyone was done climbing and was in the fourth world Masauwu laid out corn. There was yellow corn, red corn, white, corn, blue corn, colorful corn, big corn, medium corn, fat corn, etc. At this time, he instructed the people to choose a corn. Wanting the big or prettiest corn, the people rushed to grab what they thought was the best one. The Hopi patiently waited until everyone got a chance to pick. Everyone has chosen and it was now the Hopi chief's turn to pick and what was left was the small blue corn. Picking the corn, the Hopi chief showed gratitude for what they were given. Masauwu told them that since they picked the blue corn, they would be living how Masauwu lived for the blue corn was strong and can grow anywhere. They were told that they would be living a hard life like him for this hard life would remind them of the sacred covenant they made with Masauwu, that they will help take care of this land and to not forget the Hopi way of life.*

Understanding the process of lived experience is critical to this dissertation, this

necessity is described by Pallasma, "Culture is not composed of elements which can be dissembled and re-composed: culture has to be lived. Cultures mature and sediment slowly as they become fused into the context and continuity of tradition."[163] Being able to coexist with the earth creates a sense of connection, a sense of respect, and enables the creation of memories. Moreover, memories and stories depict the cultural values that are intertwined within the land. As Leslie Marmon Silko, author of *Yellow Woman and a Beauty of the Spirit,* writes:

> We came this way. We came by the place. And so from the time we are very young, we hear these stories, so that when we go out into the world, when one asks who we are or where we are from, we immediately know…We are the people of these stories…Our stories are so much a part of these places that it is almost impossible for future generations to lose them – there is a story connected with every place, every object in the landscape.[164]

Many tribes were relocated from their original homeland as a result of colonization and they were unable to take their land with them, but they were able to take their stories. Elders tell the stories in hopes the youth will learn from them, to learn the sacred connection between self and land. In his essay, "Regrounding in Place: Paths to Native American Truths at the Margins," Michael Lucas quotes Gregory Cajete from his essay "Ensoulment of Nature," expressing how connection to place is now becoming essential

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[163] Juhani Pallasma, "Tradition and Modernity: The Feasibility of Regional Architecture in Post-Modern Society," in *Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition*, ed. Vincent B. Canizaro (New York: Princeton Architectural Press, 2007), 131. http://fluxwurx.com/placemaking/wp-content/uploads/2011/03/pallasmaa_critical-positions.pdf

[164] Leslie Marmon Silko, *Yellow Woman and a Beauty of the Spirit* (New York, NY: Simon and Schuster, 1996), 58.

for cultural survival:

> The Native American identification with Place presents one of the most viable alternative paradigms for practicing the art of relationship to the natural world…the maintenance of it ecological integrity is key to…cultural survival…Connecting with their Place is not a romantic notion…rather the quintessential ecological mandate of our times.[165]

4.4 Amalgamation of Cultures

Culture isn't static. It is increasingly difficult to say that a set of cultural values can be so specifically defined that its total replacement by another set of values can be observed.[166] Culture can change, and cultures do change. It is wishful thinking to believe that the Hopi and Tewa people, or any Indigenous tribe, can easily eliminate outside influences and return to the "traditional way of life." Clara Sue Kidwell and et al. mention Anthony F.C. Wallace's concept of revitalizing Indigenous cultures is a phenomenon that is investigated by formulating a model that would reject foreign cultures resulting in a renewed, but changed, culture.[167] Rejection of American culture would be transforming and rejuvenating for the Hopi and Tewa people but my heart and logic knows that this is something unattainable. The reason it shouldn't be attempted lies within our oral traditions. The Hopi migration story tells us of the journey our ancestors took around the world and how each place provided a new lesson on life. Within each

[165] Michael Lucas, "Regrounding in Place: Paths to Native American Truths at the Margins," *Canadian Journal of Environmental Education: Removing Margins in Environmental Education* 18, (2013): 136, https://cjee.lakeheadu.ca/article/view/1217/678.
[166] Clara Sue Kidwell, Homer Noley, and George E. Tinker, *A Native American Theology* (Maryknoll, NY: Orbis Books, 2001), 96.
[167] Kidwell, 96.

lesson there is a hint of influence, good and bad, that changed their worldview. They took the elements that would help them live their life in accordance to Masauwu's instructions. We face that similar challenge today. We are faced with multiple cultural influences, struggling to keep with the "traditional way of life." Our stories tell us that we need to keep our minds open to the multiple cultural perspectives in order to find balance between the multiple worlds that most of us live in today.

Two models express the act of bringing cultures together: acculturation and syncretism. Acculturation is kinder word to express assimilation. This was the model that most Indigenous cultures followed/are following because of assimilation. Indigenous tribes were assimilated for many years resulting in the tribes eventually adopting the culture on their own accords instead of being forced to change under a sort of brainwashing expressing that one culture is better than the other.

The concept of acculturation was realized in my own life when I was attending Dartmouth College as an undergraduate student. The Native American student population is very tribally diverse and some of the students came to New England with their own unique cultural values while others come in search of learning more about their Native heritage. It was quickly apparent which students had come directly from the Reservation or a tribal community and which students had not. All of the Native students had difficulty acclimating themselves to the new, strange predominately white environment. Everyone was searching for some balance within the academic world, in some way or another. We each came from our own communities with our own unique perspective, which had molded our way of thinking. This uniqueness can be good and bad. It's good in a sense that you hold a different outlook on life and it may be bad if it's too different

from the new group thinking that it gets dismissed. Finding balance can be discouraging, especially when your non-Native peers are telling you that you need to change your views and/or your work completely in order to fit in. My personal stubbornness and pride prevented me from assimilating completely. However, I understood and witnessed how many of us Native students had to adopt new, more "mainstream" ideas and behaviors in order to truly be successful in the Ivy League environment.

Syncretism is becoming the model that many tribes are now accepting and adopting as their cultural amalgamation for it is the act of actually taking elements from another culture and making it a part of one's own culture. An example can be seen among the Pueblo culture and Christianity. Many Pueblos adopted the Christian faith but still live according to their Pueblo lifestyle. In some cases, some groups may view syncretism as a contamination of truth while a Native perspective may see it as an accommodation of cultural change rather than assimilation.[168] Another example of syncretism is told by James Aronhiotas Stevens in his essay, *Iah Enionkwatewennahton'se': We Will Not Lose Our Words*. James is a writer, a poet, and an advocate for the Mohawk language. In his writing, James developed a system he calls Sui-translation, meaning a translation for the self. He developed this idea so that traditional songs and poems remain relevant in one's own life while maintaining the Mohawk language. He provides a song or poem in the Mohawk language, followed by a literal English translation, and then his sui-translation. So often we hear songs, stories, and poems in our Native language and instead of relating it to our lives today we think back to how life was for our ancestors and may dismiss the story as useless for this moment in time. Every story has a power within it. Many fear it

[168] Ibid., 97.

will lose its power if it were to change. The truth is that it isn't the story that is changing; it is how we interpret the story that is changing. The story is told word for word, like it has been told many times before, but the lessons that we take from it is what makes it appear different to the past, the present, and the future. That is the power of stories; stories are the bridge that help keep culture strong.

In terms of architecture, there are a few examples within the Hopi tribe that express the idea of syncretism with culture and architecture. For example, "a clan that only uses its house during ceremonies may not wish to include modern conveniences while another clan that uses its house daily may wish to introduce new materials and comforts."[169] Even with the change and adoption of some of the modern conveniences, the clan members still emulate the cultural integrity of the Hopi people.

The Hopi and Tewa culture is still strongly intact and resilient to outside influences; however, there is evidence within the modern house that displays this disconnection and constant battle among cultural lifestyle. The influence is so great that there is an overwhelming feeling of powerlessness among the community; this constant concern of cultural survival. Psychological powerlessness is the result of past events, such as relocation, genocide, boarding schools, and other tactics for colonization, and is combated through cultural strength and traditional practice. Psychologists and psychiatrists repeatedly assert that once cultural strength turns into cultural powerlessness it puts in motion a decrease of self-affirmation that often leads to aggression.[170] This is evident in the increase of health issues, drugs and alcohol abuse, domestic violence, and

[169] *Kiiyamuy: Technical Guides on the Preservation and Maintenance of Hopi Clan Houses*, no.1. (Arizona: The Hopi Foundation, 1996), 8.
[170] Edward T. Hall, *Beyond Culture* (New York, NY: Anchor Book, 1976), 6.

the decrease in cultural values and practice in many Indigenous communities.[171]

Today, we have adopted the Western concept to address the Indigenous issues we see in architecture. In Edmunds et al, he discusses the idea that the institution knowledge system isn't the answer to everyone, especially to Indigenous people. The dominant knowledge system leaves a gap between architecture and culture. Architecture, being a part of the dominant knowledge system, is fighting with Indigenous culture, which is a more holistic knowledge system based on oral traditions.

Oral traditions are an act of sharing stories, songs, and knowledge. It is a method that is still practiced today in the Hopi and Tewa culture, although it is now becoming less and less due to the effects of the saturation of Western-American culture. Larry Kimura gives an example through language on how the dominant knowledge system is creating loss of base culture due to the use of a foreign language:

> When a language that holds the key to the aesthetic culture of a people is replaced with a language foreign to their base culture, the result is damaging conflict between the traditional base culture and the new aesthetic culture. The base culture becomes redefined as an aberrant subculture within the culture of the replacement language, and the original people are faced with a choice of abandoning the base culture that represents their family and friends, or rejection of the ideals of the new aesthetic culture, which sets the means for acceptance and success in their daily society.[172]

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[171] Emily Guarnotta, "Native Americans and Alcoholism," *Recovery.org*, November 23, 2016. Accessed September 17, 2017, https://www.recovery.org/topics/native-americans-alcoholism/.
[172] Larry Kimura, "Native Hawaiian Culture," in *Native Hawaiians Study Commission Report on the culture, needs and concerns of Native Hawaiians Pursuant to Public Law 95-565, Title III*, vol. 1 (June 23, 1983): 181, http://files.eric.ed.gov/fulltext/ED254608.pdf.

It would appear that using culture as a driver for design would seem detrimental after juggling through so many different interpretation of the term "culture." However, history shows us that the definition of architecture and culture continuously develop and change over time. The importance of culture in architecture fluctuates among generations of architects, but what can be concluded is the dialogue that they contributed to this subject matter.

> As we enter the first decade of a new millennium, Native and Western cultures and their seemingly irreconcilably different ways of knowing and relating to the natural world are finding common ground and a basis for dialogue, the integration or the lack thereof will determine the direction of contemporary society in the twenty-first century.[173]

That is, among the handful of Indigenous and non-Indigenous scholars, the definition of culture has formed into an amalgamation of the environment, music, astronomy, philosophy, history, social behaviors, landscape, religion, phenomenology, and cosmology.

In today's world we need to take the attributes among the diverse cultures and find innovative ways to make a balanced solution and to continuously build off of that. It isn't a new concept to have Indigenous and Western cultures coexisting, one may outweigh the other, but to find a balance between the two worlds would be transforming. Western culture is mainly defined by the systematic method and how the people develop, adopt, and adapt to the ever-changing world. The greatest influence today is technology

[173] Gregory Cajete, "Philosophy of Native Science," in *Native Science: Natural Laws of Interdependence* (Santa Fe, N.M.: Clear Light Publishers, 2000), 56.

and we can see today how it has overpowered our Hopi and Tewa culture. As you have read through this chapter, you have seen a small handful of different interpretations of cultures ranging from the systematic study of behavior patterns, traditions, and typology, to name a few, to the acceptance that culture is complex and ever-changing. This chapter offers a glimpse of an Indigenous perspective that recognizes that everything is connected in a holistic and non-systematic way, to the conclusion that the amalgamation of cultures is an idea that needs to be attempted within Indigenous architecture. To find a common ground in architecture and culture isn't a matter of finding a grand new solution, but it is merely taking what we know now and integrating different types of perspectives and concepts in an innovative way. For this dissertation project, the cultural base that displays the common ground between architecture and culture is the connection to the earth and the earth's cultural life lessons that the Hopi and Tewa people embrace.

CHAPTER 5. WHAT IS A HOPI HOME

5.1 Home Will Always Be Here

> "There was a time in our past when one could walk down any street and be surrounded by harmonious buildings. Such a street wasn't perfect, it wasn't necessarily even pretty but it was alive. The old buildings smiled, while our new buildings are faceless. The old building sang, while the buildings of our age have no music in them." – Jonathan Hale[174]

Could a home, in fact, reinforce and nurture the tribal values about culture and the natural environment?[175] What makes a home? The atmosphere? The floor plan? The environment? The cultural values? The family? There are many components that go into creating a home. (Fig.75) One Hopi interviewee said a house is an empty structure that has a potential to be a home. Throughout the ages, the house has been called many words from all languages, the word "home" is just one of the many. Still, even with this one word there are many different meanings, experiences, and understandings that emerge. From an anthropological point of view, the primitive homes of the Hopi and Tewa were considered shelters for they provided the basic needs for survival. The idea of cultural

Figure 75. Core Connections in Indigenous Planning from Hirini Matunga

Source: Hirini Matunga, "Theorizing Indigenous Planning," in Reclaiming Indigenous Planning, ed. Ryan Walker, Ted Jojola, and David Natcher. Montreal; Kingston: McGill-Queen's University Press, 2013.

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[174] Jonathan Hale, *The Old Way of Seeing: How Architecture Lost Its Magic (And How to Get It Back)* (Boston: Houghton Mifflin Company, 1994).

[175] David S. Edmunds, Ryan Shelby, Angela James, Lenora Steele, Michelle Baker, Yael Valerie Perez, and Kim TallBear, "Tribal Housing, Codesign, and Cultural Sovereignty," *Science, Technology, & Human Values* 38, no.6 (2013): 801-828, doi: 10.1177/0162243913490812.

significance in those shelters were scarcely considered beyond the scope of survival. However, if we are to shift our attention away from the basic definition of a house to the inner depth of a home, we can then experience a phenomenon only reached beyond the surface of the walls, shape, space, furniture arrangements, appliances, cost, square footage, style, etc. The concept of a home isn't a new concept. There are many scholars discussing the concept of a home such as, Ryan Walker, Ted Jojola, David Natcher , Rina Swentzell, Ruth Makaila Kaholoa'a, David Seamon, Anthony Lawlor, Kim Dovey, Gaston Bachelard, David Pearson, and the plethora of others whom these individuals referenced in their own works. The definition of a Hopi home has emerged with the assistance of the individuals mentioned above, plus everyone cited in this paper, and most especially with the guidance and input from the Hopi and Tewa people.

First, the idea of a home is not just tied to the structure of the house. The house is often defined as an object that's within the environment, each acknowledged as two separate entities. In 1889, ethnologist Alice Cunningham Fletcher and fellow reformer E. Jane Gay left their home in Washington, D.C. and traveled to Idaho Nez Perce Reservation bent on convincing the members of Nez Perce that home ownership was the quickest route to civilization.[176] In this example, we see that they treat the word "home" as a physical object that can be easily possessed and occupied. (Fig.76)

Figure 76. Home for Sale

Source: "Homes For Sale Boosting Curb Appeal Will Attract Buyers Picture" Digital image. House, accessed October 25, 2017, http://houselovers22.blogspot.com/2014/12/house-for-sale.html.

[176] Jane E. Simonsen, *Making Home Work: Domesticity and Native American Assimilation in the American West, 1860-1919* (Chapel Hill: The University of North Carolina Press, 2006), 1.

In the Hopi and Tewa perspective, the idea of home isn't a physical structure that is easily bought and possessed. Instead the understanding of home is made up of two aspect which, at one point in time, coexisted. The first aspect of home is the connection the people have to the natural universe that they grew up in, the land that they hold sacred in their hearts. The Hopi and Tewa people, as well as many other tribes, are still strongly connected to this idea of home. The second aspect is the connection people have to the physical structure of the house as a home, which is the "place that should hold the promise of harmony and revitalization."[177] (Fig.77) The idea that the house is the home is in a constant flux for the Hopi and Tewa people because they are having a challenging time connecting to the current HTHA housing that is provided to them. This type of modern housing encourages the people to have an "easier lifestyle," which has become

Figure 77. Hopi and Tewa people once saw the house and the natural universe as one. It blended into each other, rather than the blurry lines we see today.

Source: BriAnn Laban

[177] Anthony Lawlor, *A Home for the Soul: A Guide for Dwelling with Spirit and Imagination* (New York, NY: Clarkson Potter/Publishers, 1997), 14.

difficult for the Hopi and Tewa people for it doesn't reflect their worldviews. A Hopi home used to be a relationship with the land, house, and worldview in a holistic coexistence. Reinvigorating the original relationship requires redefining home for the Hopi and Tewa people in today's society.

5.2 Land as Home

> "At eighteen, I moved from the Great Plains to the granite hills of New Hampshire where I was suffocated by towering, claustrophobic trees. Now when I go home, the simple size of the sky leaves me speechless. My eyes skim in vast circles trying to swallow all that is above. Every time I descend 'The Big Hill' into the valley of the Northern Cheyenne, I get butterflies and my heart races -- that's the feeling I long for. My spirit reconnects with the land. I'm home." – Cinnamon Spear[178]

The continuous influence of Western culture can challenge the notions of home. Influences such as relocation, change in the environment, places built to exploit the people, places built out of the exploitation of the world's scarce resources, places that pollute the air, water, and land with their toxic wastes resulting from capitalist exploitations. They are tantamount to a rape of the environment; moreover, they are an assault on ourselves and our sensibilities.[179] Ruth Makaila Kaholoa'a from the documentary, *Hawaiian Voices: Bridging Past To Present*, mentions that Western influence, in this case Western currency, is trying to encroach into their Hawaiian values but she iterates the connections the Hawaiians have with the stones and how this connection keeps them alive. She says:

We don't care about your money. Take it back from where it came from, we don't

[178] Andrew Garrod et al, *I Am Where I Come From: Native American College Students and Graduates Tell Their Life Stories,* "Little Woman From Lame Deer," Cinnamon Spear (Cornell University Press, 2017)
[179] David Pearson, *Earth to Spirit: In Search of Natural Architecture* (San Francisco: Chronicle Books, 1995), 12.

> need your money. Leave us here with our stones. We can live on stones. Hawaiian people. Stones they built the hale. They built the house foundation. With stone, they pound the poi. With stones, they cook their food in the 'In'. With stone they [carve] the canoe.[180]

Many Indigenous tribes link their values, spirituality, identity, and entire existences to their land. It is this link that deepens the connection to the idea of home. Indigenous tribes carry their home with them wherever they travel. It's not necessarily a physical object they carry, it is the oral traditions of the land from which they come and the natural phenomena that they have experienced from living in close proximity to the land that they carry in their hearts. Leigh Kuwanwisiwma shares:

> *They always refer to the reservation or their villages as their home. For example, my daughter is like that. For a long time, she's been in Phoenix working but she always says "Dad, we are going to be coming home this weekend", or "We are going to be coming home this thanksgiving". It's always home. So, when they are out home and they are going back Sundays, she says "We're going back to Phoenix." She doesn't say home, even though she has a house down there. It's kind of like that, you always have this cultural attachment to the villages because that's where you grew up. That's where the culture is and that's where the clan is centered around. Also, the social stuff with the kinship, everybody is related to somebody. So, all of that together, I think, is what really shapes how you think*

[180] Ruth Makaila Kaholoa'a, *Hawaiian Voices: Bridging Past to Present*, directed by Eddie Kamae; produced by Rodney A. Ohtani and Myrna Kamae. (Honolulu, HI: Hawaiian Legacy Foundation, 1998). DVD. http://search.alexanderstreet.com.eres.library.manoa.hawaii.edu/anth/view/work/bibliographic_entity%7Cvideo_work%7C2442656.

about who you are. It is this place, the villages here, First Mesa, Second Mesa, Third Mesa, that's home. That's always going to be home.

Even if you find a career somewhere else. You may have found a nice job and got your own place to live but I bet you will still think that home is here at First Mesa. It's the environment itself that gives us that kind of feeling about our reservation and part of it is the villages. Also, part of it is visualized in the landscape around you, that's home. You wake up every morning and you see the Hopi buttes (Fig.78) out there and the landscape. You kind of just walk through that experience but think about it, it's there with you all the time. That visual part of it helps you call it home.[181]

Figure 78. Hopi Buttes. *"You wake up every morning and you see the Hopi buttes out there and the landscape."*

Source: BriAnn Laban

[181] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

The Hopi worldview is engraved within the land by the everyday activities of the Hopi and Tewa people. It is with this relationship with the land that contributes to the sense of self and connection to home. Evangeline Nuvayestewa helps with the definition of connection to home by providing her insight and experience of being away from the Hopi Reservation.

> *No matter where you are, home will be home sweet home. You come home from traveling, from experiencing life lived all over. With my husband being in the service, I got to experience a lot of different ways how people lived out there but I always was lonesome for home. There's really nothing here, like no grocery stores, no Bashas or anything but still, home is home. You still get lonesome for home. And every day we get up and we pray, we pray for good health, prosperity, and everything, not only just ourselves but everybody, all the living beings. Every morning we prayer, and we're all taught in the home, before we eat, that we always have to feed everybody and everything. We put that [little bit of food] aside for them to eat before we start eating. When we're finish eating we always have to be thankful for it. We say, Guna'ah vi we'ah.*[182]

Figure 79. Home sweet home. Evangeline Nuvayestewa is from the Village of Tewa, which sits at the eastern tip of First Mesa.

Source: BriAnn Laban

[182] Evangeline Nuvayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016.

Many Indigenous tribes understand the sacred connection between self and land. Kingi Tanira and et al. discusses the connection of the natural environment by bringing forth the Māori worldview that captures their customs, values, attitudes, and beliefs. They discuss how the worldview of the Māori is what builds the relationship between their natural environment and themselves. Comparable to what Hirini Matunga states in "Theorizing Indigenous Planning" in *Reclaiming Indigenous Planning,* that "these worldviews and underlying values reinforce the inextricable link that exists between the community and, via the medium of ancestral land, their ancestor."[183] Similar to the view expressed by Kingi Tanira and Hirini Matunga, Rina Swentzell, a Santa Clara Pueblo, further strengthens this idea by stating:

> At the center of the Pueblo belief system there is a conviction that people are not separate from nature and natural forces. This insoluble connection with nature has existed from the beginning of time. The goal of human existence is to maintain holiness or oneness with the natural universe.[184]

The Hopi people left their footprint across the land during their migration journey. It tells of the Hopi people's journey across the land and how they came upon the land that is now called the Hopi Reservation. When asked what home means to them, one participant, Kristy Pavatea, a female Tewa adult, answered:

> *When you ask me where my home is, my first instinct would be to say Hopi, the Hopi Reservation that's where my home is. Unless somebody asked me what's the*

[183] Hirini Matunga, "Theorizing Indigenous Planning," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013), 42.
[184] Rina Swentzell, "Rina Swentzell: An Understated Sacredness," YouTube video, 18:21, posted by New Mexico PBS, KNME-TV, November 30, 2009. Accessed September 2, 2017, https://www.youtube.com/watch?v=8zHAiOKN6Vo.

physical location of your home, then I'd say it's along highway 264, you know, that sort of address. But if you asked me where home is, off of instinct, it be the Hopi Reservation.[185]

Without hesitation, she used the word instinct. Her choice of words reiterates the cultural knowledge and oral traditions that many Hopi and Tewa members inherited from their ancestors. The following story communicates the footprints the Hopi people have left and how the many places they came across embody the Hopi and Tewa people's definition of home. In order to keep the story concise, this story is retold here in the author's version that has been given through oral traditions. A detailed version can be found in the *Book of the Hopi*, recorded by Frank Waters and Oswald White Bear Fredericks.

At the moment of emergence, the people were given different languages. This is when the people who were once one became many. After everyone selected their corn, Masauwu told them they had to go on a journey to find their permanent home, or central place. Masauwu provided sacred tablets that outlined the migration pattern they would take and gave detail of what they would be looking for in a permanent home. They were instructed to journey in all directions and to leave their footprint so that the others would know who came. They saw forests, swamps, mountains, plains, the sea, and deserts, learning from each environment. Many years have passed when the bear clan came upon that land that is now called the Hopi Reservation. It was the land that would always take care of them if they showed respect and kept to their promise as being caretakers of this land.

[185] Kristy Pavetea, interview by BriAnn Laban, Hopi Reservation, November 2016.

The story is what the ancestors left for the current generations to adhere to. Someday the stories of today's will be added to the abundance of oral traditions that are passed on. Jonathan Osorio, Interim Dean of the Kamakakuokalani Center for Hawaiian Studies School of Hawaiian Knowledge, reiterates, "I am going to reassure you that the story that you, all of you, are weaving for yourselves comes from your lands and your families and that they will be added to all those voices speaking to your millions of descendants."[186]

Currently, there are Hopi and Tewa individuals who are sharing and learning the deep relationship with the natural environment. Such as, Ferguson and Koyiyumptewa, co-authors of *Footprints and Clouds in a Living Landscape*, express that:

> The landscape, natural features, places names, archeological sites, sacred sites, plants, animals, minerals, and artifacts found in these locations are connected to the Hopi people through ceremony, traditional histories, and oral traditions…[that] in the living landscape of the Hopi, the people are part of the land…[F]or the Hopi people, these footprints and clouds are inexorably linked in a spiritual and historical landscape that connects the past and present, giving deep and lasting meaning to the land.[187]

For example, Mount Taylor and the San Francisco Peaks are among the many sacred sites that are held dear to the Hopi and Tewa people. The quote below articulates the deep connection that the Hopi and Tewa people have to land.

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[186] Jonathan Kay Kamakawiwo'ole Osorio, "Intimacies: Poetics of a Land Beloved," (HWST 601: Indigenous Research Methodology, University of Hawai'i, 2016).
[187] Ferguson, T.J., Stewart B. Koyiyumptewa, "Footprints and Clouds in a Living Landscape: Notes on Hopi Culture and History Relating to Chaco Canyon, Aztec Ruins, and Mount Taylor," *National Park Service*, purchase order P1217080010 (Hopi Cultural Preservation Office, 2009), 1-40.

Figure 80. Mount Taylor comprises a living landscape inhabited by ancestral spirits. The Hopi Cultural Preservation Office offers this meditation.

Tsiipiyay omawkive	Mt.Taylor, home of the clouds East Great Kiva of the katsinam
Itanam itamuy ayata	Our circle of fathers is instructing us
Yupavo ayoo tawapat oom'i	Go over there above the spring where the village is
Ep itamuy pahomantu naawakinaya	Where the Katsinam mother prayers and offerings Are waiting for us

Text Source: Ferguson, T.J., Stewart B. Koyiyumptewa, "Footprints and Clouds in a Living Landscape: Notes on Hopi Culture and History Relating to Chaco Canyon, Aztec Ruins, and Mount Taylor," *National Park Service*, purchase order P1217080010 (Hopi Cultural Preservation Office, 2009).

Photo Source: "Mount Taylor," Digital image. *National Trust for Historic Preservation,* accessed October 25, 2017, https://savingplaces.org/places/mount-taylor#.WfJDc2hSyUn.

Mount Taylor is an integral part of a living cultural landscape that encompasses the San Juan Basin. The Hopi men we worked with told us that the spirit beings marked the land with important points. The San Francisco Peaks near Flagstaff are the "plaza" for the Hopi people. Mount Taylor is the "plaza" for all Pueblo people…Once a mountain becomes sacred, it remains sacred. The Hopi people say that "spirit peaks" of Mount Taylor and the San Francisco Peaks face one another, and the area between them is hallowed land. As Harold Polingyumptewa pointed out, the San Francisco Peaks, Mount Taylor, *Toko'navi* (Navajo Mountain) and Bill Williams Mountain all "look at one another," so the mountains thus delineate a significant cultural boundary.[188]

Figure 81. San Francisco Peaks. The "plaza" for the Hopi people.

Source: BriAnn Laban

[188] Ferguson, T.J., Stewart B. Koyiyumptewa, "Footprints and Clouds in a Living Landscape: Notes on Hopi Culture and History Relating to Chaco Canyon, Aztec Ruins, and Mount Taylor," *National Park Service*, purchase order P1217080010 (Hopi Cultural Preservation Office, 2009), 41

Rina Swentzell expresses this understanding through the Pueblo people as a whole and being able to describe the "primary and most important relationship for humans is with the land, the natural environment, and the cosmos… Humans exist within the cosmos and are an integral part of the functioning of the earth community."[189] Phenomenology is an associated concept to the ancestral relationship as described above. David Seamon, a professor of Environment- Behavior and Place Studies in the Department of Architecture at Kansas University, focuses his interest in the phenomenological approach to architecture, place, and environment. In his essay, "Phenomenology and Vernacular Lifeworlds," he iterates how the phenomenological relationship with the landscape can "shed light on the built form and culture."[190] Phenomenology experience is influenced by the environment rather than the technical world that we have now come to live in. Landscape cradles the idea of sense of place and creates an atmosphere for the built form. It is the smell, taste, sight, touch, and sounds that deepens the link to this place called home.

Understanding and experiencing these phenomena is what causes a force that keeps pulling many Hopi and Tewa people back to home. One female Hopi elder mentioned how she feels after seeing the glimpse of the silhouette of second mesa that is visible once you come over the hill on Route 87, a little past Teesto, Arizona. She says that the mesa "blend(s) in with that environment and, that driving into the Hopi Reservation from Winslow, you see second mesa there…puts this feeling into you that

[189] Rina Swentzell, "Conflicting Landscape Values: The Santa Clara Pueblo and Day School [Vision, Culture and Landscape]," *Place Journal 7*, no. 1 (1990), accessed January 09, 2017, https://placesjournal.org/assets/legacy/pdfs/the-santa-clara-pueblo-and-day-school.pdf.
[190] David Seamon, "Phenomenology and Vernacular Lifeworlds," in *The Trumpeter: Journal of Ecosophy* 8, no.4 (Fall 1991): 202, http://trumpeter.athabascau.ca/index.php/trumpet/issue/view/81.

your home."[191] (Fig.82) You can see where the sky meets the mesa top and where the ground sits below the mesa. As you drive closer, you begin to see the layers and shadows of the rock formations. Closer and closer you begin to see the little outlines of the houses that sit atop the mesa. The sky now rolls beyond the mesa top creating this canvas that the mesa sits in front of. Route 87 is coming to an end and now the foot of second mesa is right in front of you. Finally, home at last.

Figure 82. "Puts this feeling into you that your home"

Source: "Google map," accessed September 25, 2017, https://www.google.com/maps/@35.6553309,-110.4910802,3a,60y,90t/data=!3m6!1e1!3m4!1sNeM-Zoc8N7kdfs7FBjhB5g!2e0!7i3328!8i1664.

[191] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, November 2016.

5.3 House as Home

> They developed a particular sense of place and time, and knew the vital importance of honoring the primeval forces. Everywhere, Indigenous building strove to express a harmony between people, land, and cosmos – to make forms that linked earth to spirit. – David Pearson[192]

Anthony Lawlor wrote a book called, *A Home for the Soul: A Guide for Dwelling with Spirit and Imagination*, and within it he explains how the home went from a complex impression to a simple expressionless dwelling and how that affected the soul. He used the traditional European home to express his thoughts by stating how the "thatched or tiled roofs, plaster walls, and oak doors" offered a place of stability and that the windows provided stimulation with the "subtle nuances of shade and shadow".[193] Nevertheless, over time, housing has shifted from uniquely reflective of one's needs to becoming standardized through cost-effective and time-efficient methods. This means housing continues to be affordable, low-maintenance, and standardized. In the minds of a developer, these qualities are ideal.

However, for a homeowner, an Indigenous homeowner to be precise, this standardization based on cost and time efficiency results in a decline in the homeowner or occupant's overall wellbeing. On the Hopi Reservation this type of affordable, low-maintenance, and standardized housing is seen throughout the landscape. When a housing proposal is announced these are just a few of the terms that are spoken to provoke interest and support towards the design. We have come to appreciate these terms, such as affordable and low-maintenance, and have used them to define our home. But have we

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[192] David Pearson, *Earth to Spirit: In Search of Natural Architecture* (San Francisco: Chronicle Books, 1995).
[193] Anthony Lawlor, *A Home for the Soul: A Guide for Dwelling with Spirit and Imagination* (New York, NY: Clarkson Potter/Publishers, 1997), 26.

really understood what these terms mean for our Hopi home and wellbeing?

Affordable is also referred to as inexpensive, feasible, and low quality. These words are spoken so often when a housing project is discussed. Of course, everyone wants a house to be affordable but what is the real cost? Home is something you work for - whether it be building your house with your own hands from the ground up, or helping with the design, or maintenance, or house chores, etc. Contributing your time and effort in some way always leaves you with a good feeling. The home contributes to your well-being; it helps you to live. Ted Jojola in his chapter "Indigenous Planning: Towards a Seven Generation Model," tells a story of how a planner in the Oneida Nation of Wisconsin learned this perspective in an unexpected way. He shares:

> As housing manager, she met with Elders individually to prepare them for a replacement program intended to provide new housing. In the meeting, she explained at length the benefits of living in a modern house. An Elder responded, "Well, it certainly sounds wonderful and all . . . but, you know what? If I move into that new house I will die!" Dumfounded, she replied, "I don't understand, this house is supposed to make your life easier." "But that's the point," the Elder retorted. "Every morning. I look forward to waking up in a chilly house. I go outside to chop wood for the stove, bring water into the house, and warm it up. When these chores are done, I know I have done something. My blood is circulating and this keeps me alive. What am I going to do when I move into this modern house? I won't have anything to look forward to!"[194]

[194] Ted Jojola, "Indigenous Planning: Towards a Seven Generations Model," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013), 466.

The Oneida elder's story reflects the same principles of the Hopi people. Just because something is new and easy doesn't necessarily make it better. Putting yourself into your home is a deep defining factor that contributes to the idea of a Hopi home. A young Hopi and Tewa man expressed this awareness through his story. When he was a child, he was already taught this lesson from he's elders. He shares:

> *Looking at my qua-ah, he didn't go through HUD to build a house for my so'oh. He built it himself. He always told me that when I was growing up because I always wonder who built his home for him. He said, 'I did, I built this home.' I then I said, 'did someone help you?' And he say, 'Yeah, my brothers helped me here and there.' He said the Hopi way is that you build the house for your wife. That's your part as a man, playing that role to build that house. That's what keeps playing in my mind, that if I do get a house I would like to build it myself. In a way it kind of makes you feel good about yourself and I think people also see it differently. Saying things like, he's a good builder, look he build that house all by himself. That kind of puts that positive vibe on you. Versus someone that says that the Hopi HUD home built that for his wife. I mean our elders, if I do get a wife, might come and ask me if I built my house for your wife. I'm would say no some guys did.*[195]

A Hopi couple shares their story of designing and building their own home. They discuss how their home was created and the challenges and detours that occurred along the way. They expressed how they enjoyed having that power to decide their design, the construction method, and their choice of materials. They iterated that they could have

[195] Devan Lomayeoma, interview by BriAnn Laban, Hopi Reservation, November 2016.

gotten a house through HTHA and that the HTHA would have provided the materials, the manpower, and some funds towards their house if they had chosen them to construct their house. However, through HTHA they would have lost that independence and that self-satisfaction that they contributed and built their own home from their own two hands.

> *Well you know especially when you talk about what we're talking about now, especially here in K-Town, I can probably look at maybe one or two spots, one or two or three, building structures that are all very old where they use just little pieces of stone and then just stick it against the mud and, you know, make their walls and structures like that. Then it went to the formal stone cutting type buildings. And then of course what we have today. The cinder block, the brick, and then the wood frame. So, I never really thought about it until, I guess for a person like me after you know, like I said I build my own home, and I kind of appreciate what kind of laboring went into it. I look at that old type building, [the] stone house, the brick and the labor [and] I appreciate what I did for myself. You're just able to recognize the labor and the value of the home itself, not so much in terms of capital dollars, but what really a home means after you build it. Like pride.*[196]

Building your own home provides you with a sense of pride towards it. It makes you feel alive because you appreciate the effort and time it took to finish. This sensation takes on a whole different meaning when you have worked towards finishing a goal, project, or task. For instance, a child creates a drawing at school and they are so proud and excited to share with their parents that they take the extra time and effort to place

[196] Herman Honanie, interview by BriAnn Laban, Hopi Reservation, November 2016.

their drawing neatly in their backpack so that it won't get wrinkled. This same idea applies with the home. Of course, building your own home may not be feasible today because of the 8-5 schedule that many of us are committed to, but to put yourself into it, besides your dollars, a common thread in the interviews is that if you take care of the home it will create a more satisfying, humble, and nurturing connection with the house. Simply put, if you are to care for the house, in return it will take care of you.

Low-maintenance is also referred to as functional, proficient, and efficient. Of course, everyone wants a house to be low-maintenance, especially with how busy a person gets with everything else in life. Does that mean that the home becomes an object that can easily be replaced or forgotten? Yes, when an object becomes insignificant we tend to forget it. As human beings, we need stimulation and that is why we run, read, dance, play games, and do basically anything that makes us happy. In order to partake in those activities, we need to devote some time and energy. The same idea applies to a home, a Hopi home in this case. If we are to have houses that are low-maintenance to the point where there is no need for human interaction, then the home has lost its purpose. Once that connection is broken then the home becomes a house and then the house becomes an object waiting to be forgotten. The house is there to provide shelter, but a Hopi home is there to take care of you and for it to do that it needs interaction from the homeowner, the occupants, and also the community. One Hopi tribal member, from the village of Moencopi, communicates his understanding of community and how it shapes the Hopi perception of home. He shares:

> *The philosophy, the Hopi philosophy, really is it's a way of life. It's a way of life that promotes serenity, togetherness, being ambitious, and always thinking of*

things that need to be done but helping people that are around you because we're all in this one boat. We're all in this one boat and that's the Hopi boat and we all have to row. We can't be lazy. You know like they say to us, don't be lazy, don't lay around. So some of those values that I learned from my family were some of those things that were taught to me, or taught to me and told to me. So as I was growing up I was able to, I think I was able to be helpful when I could. I thought of the family, I thought of my brothers and sisters. I mean we were all together as a family and as a clan you know…So the philosophy of the Hopi world is that we're not alone and we have to help each other. We can't do without each other, so in order to do that we have to be kind to each other. We can't be saying things about each other or saying things to people that hurt them you know…So the Hopi world, philosophy of Hopi, is that it's a world that's not a materialistic world. It's actually a personal relation. It's a world where you have a lot of relationships going on, people helping each other. Growing stuff and sharing it, all out there.[197]

Long ago, almost everywhere in the Hopi villages you could see a hint of the relationship of the community and the houses. The interactions they had with each other stimulated the sense of home. Individuals who grew up on the mesa would bring up memories of the activities they did as a family and as a community. Others would tell their stories of how different it was compared to today. These types of memories aid in developing the definition of a home. Today, the house is designed to take care of itself. The walls are made of materials that can combat and withstand abuse from the elements for a longer period of time. The roof is pitched so that rain and snow can easily wash/melt

[197] Evangeline Nuvayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016.

off. With these low-maintenance designs we have more time to do other work or procrastinate; however, we lose time with our home which results in a disconnection. Below is a story giving by Eldon Kalemsa, a Hopi member from the village of Sipaulovi, about how he saw the people in the village shovel the snow off the roofs and that the walls needed to be re-plastered. His tone would express how it was more fun than work because the people would engage with one another. It was the act of coming together as a community and maintaining or taking care of the well-being of their houses that created this home environment.

> *Usually during winter, we just let the snow sit up there [on the roof] and then let it melt. But during winter [35+ years ago], that was also part of the maintenance, you know. They would, as soon as it snowed before it even started melting, they would already sweep it off so it never got wet…Uma lauwu, are you cleaning? [chuckle]…The whole village you could see everybody on the roofs. But that was the other thing and that's the reason why the village only had one wall was because everybody cooperated in maintaining. So like, that's the other thing was every home dance the whole plaza was plastered and all redone so that not only renewed the complexion, that face, but we now sustained it, we put more mud on it, made it nicer and now it's more but that was the maintenance. That maintained to where it was always strong. So those things you know were some of the stuff that took place.*[198]

Memories of family gatherings and community interactions are still occurring but mostly during ceremonial times or holidays. "When dances come that's about the only

[198] Eldon Kalemsa, interview by BriAnn Laban, Hopi Reservation, November 2016.

time we really get to see everyone that's up there because we're so spread apart from where everybody is living."[199] Today, the modern house doesn't allow for these interactions to take place. They are designed more so for privacy and isolation, which is a Western custom that doesn't reflect Hopi values. In order to get back to the concept of a home, a Hopi home, we must remember that, we as Hopi and Tewa people, we are not separate.

> *A home is where everybody meets, where everybody do things, and where everything happens all the time. Compared to a house it's kind of like a hotel where you just go there to sleep, take a shower, eat your food, and leave. That's it, it's like maintenance on yourself real quick. There is nothing and nobody there, that's a house. A home is a place where everybody meets, you always have something to do. Everybody is always busy doing something. You're never just by yourself, there's always got to be somebody else there.*[200]

As human beings we strive to maintain that oneness with our environment, and the people who live around us are a part of that environment. Maintaining the home is a large contributing factor in defining what a Hopi home is, as expressed from the story provided above. But simple family and community interaction is also a principal factor in the definition of a Hopi home. For example, there was a Kachina dance one summer weekend and everyone was gathered on top of the mesa. Lunch just ended and everyone went outside to watch the dance, except for a few who hadn't eaten yet. While sitting and eating at the table, stories began to emerge.

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[199] Verna Nahee, interview by BriAnn Laban, Hopi Reservation, November 2016.
[200] Hopi member from the village of Shungopovi, interview by BriAnn Laban, Hopi Reservation, November 2016.

Back then everything was fun. Having fun in a good way. Nowadays, you're not having fun unless you're destructive or something. People used to have their doors open. Nothing was locked. At night, you sleep with the doors open. Nobody bothered you, you just put something across the door so that the dogs wouldn't get in. But nobody bothered you, no lock on your door or anything. Back then we didn't have anybody doing anything bad, like breaking into your home. You had dry meat, corn, if you had no room in your house we used to have the watermelons and stuff outside, nobody bothered it. But nowadays you can't leave anything around.

The thing right now is we're not teaching our kids respect. There's really no…like the uncles, the uncles were the ones to do the lecturing and stuff like that. But that seems to be dying away now. Because we're scared of our own children. We hate to give them advice because they get mad and stuff like that…And like this we don't eat together like this anymore. And that's where things are supposed to be discussed like we're doing now. All sitting at the table, how was your day, or what are you thinking about, that's what we all talked about. But nowadays everybody is eating in the living room, watching TV, or here and there. Not like a family…Come on, come eat. Wait, wait, wait. Or the best word is hold on, hold on. Everybody is hold on. But that's how it was back then everything and everybody was together.[201]

The Hopi and Tewa people may still be strongly connected to their culture. However, the current housing model does not reflect or respond to the Hopi cultural needs. Therefore, it

[201] Randolph Mahle, interview by BriAnn Laban, Hopi Reservation, Summer 2017.

continues to separate the people from their cultural worldview, resulting in the Hopi way of life becoming only a weekend activity during ceremonial times, as expressed from the story provided above. It is important to design with the idea of culture in mind so that past mistakes are not repeated. For example, Arlene Honanie, a Hopi female elder tells of one of the important Hopi cultural values of inviting and greeting visitors by stating, "Come in, sit down and eat." This cultural practice is still performed today but the current housing types do not reflect this value, which begins to create a disposal of cultural practices. She begins her story by stating:

> *My brother he's a builder, he did this part [points to a section of the house] and he would have liked to situate it more this way just because of the wind factor…See this part [points to same section of the house] was already here, somebody else did that for us. So that person that worked on it didn't think like my brother and so [if] he had his way, we would have gone this way and then the door facing that way. [What's] the first thing that people do when they come in, is eating, right? That's our main thing, that's how you greet people. Pevhova yungu'a. Pep uma nonovani. That's the first thing you do. So that was why we wanted that kind of opening. Western concept is a living room. That's where you first come into when you're visiting, but us [Hopi] what do we do we say, Pevhova nonova. Sit down and eat. Okay so that was why we wanted this part, the kitchen part to be your opening into your home.*[202]

Everything in a Hopi home had a purpose, a reason for being designed, placed, and formed. Unfortunately, how Western practice went about to address the Hopi community

[202] Arlene Honanie, interview by BriAnn Laban, Hopi Reservation, November 2016.

housing needs was more so to make it affordable and low-maintenance, which completely disregarded the traditional order of living in the community. In order to stay within these parameters their design method was to create a standardized housing type that can be replicated over and over again.

Standardization is also referred to as sustainable, repetition, and likeness. Of course, repetition is needed in our lives for it helps us keep track of task, people, events, cultural knowledge, and much more. However, standardization in architecture, for the purpose of saving time, money, and resources, then creates a house that is bleak. The act of standardization in style and method brings imbalance and disconnection to the community and the environment because it disconnects us from our environment and requires no personal interaction. (Fig.83)

Figure 83. Disconnection to the house. The outside world is always in motion. The house design may be able to care for itself, but it has now become a plain object that is misplaced in the interactive landscape. The interior of the home has also become a dark pit of lost emotions and distant objects.

Source. BriAnn Laban

Jonathan Hale explains this by stating, "In a township of disharmonious buildings, such as is common today, we feel no mystery, no promise. We are not intrigued; there is nothing to explore."[203] The Hopi Reservation is scattered with standardized housing types or arranged in an area that is filled with rows and rows of repeated houses, which creates a strange vortex between life and lifelessness. A Hopi home would not create a lifeless and isolated housing type for each family. Instead, it would reflect our traditional, culturally connected homes. Rina Swentzell provides a Pueblo perspective and states that, "Since everything, everybody, and every place is sacred and has a central worth, there is no need to individuate. The people and their world are sacred and indivisible."[204] In addition, a male member of the Hopi community revealed through interview a sentiment that contributed to this conversation by saying, "Culturally, the home is very important to the Hopi and so it's not just done out of haste…No, it was for a reason, for a purpose."[205]

Hopi architecture, as well as many traditional Indigenous architectures, always had a sacred purpose that supported their cultural values. A few examples include supporting the baby naming ceremony, adult society responsibilities, and even aesthetically the earthen houses were intertwined with the landscape, allowing them to blend in with their surroundings. This made it difficult to see any separation between the house and the land. Contrastingly, the houses of today merely sit on top of the land like a puzzle piece that is forcefully trying to fit into a space where it does not belong.

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[203] Jonathan Hale, *The Old Way of Seeing: How Architecture Lost Its Magic (And How to Get It Back)* (Boston: Houghton Mifflin Company, 1994), 5.
[204] Rina Swentzell, "Rina Swentzell: An Understated Sacredness," YouTube video, 18:21, posted by New Mexico PBS, KNME-TV, November 30, 2009. Accessed September 2, 2017, https://www.youtube.com/watch?v=8zHAiOKN6Vo.
[205] Eldon Kalemsa, Hopi Tribal member, in discussion with the author, November 2016.

5.4 Conclusion – Home Belongs to Everyone

> A home is more than just bricks and mortar – a physical barrier against the world. It should be seen as a second skin – a protective and nurturing envelope – that caters to your social need for a welcoming meeting place for family and friends, and your psychological needs for rest, play, and study. A home has to be a sanctuary, a very personal place where your emotional and spiritual lives can be fulfilled, but at the same time it has to interact with the wider environment. – Joanna Trevelyan[206]

Kimberly Dovey asserts that the home is defined as a kind of relationship between dwellers and their dwelling places. That through the various kinds of order, identification, and dialectic processes, the theme of a home emerges beyond the concept of a house. [207] The house may be of an objective nature composed of doorways, windows, furniture, appliances, walls, roof, etc., but all these elements and the land, when used appropriately, support the idea of a Hopi home. A Hopi home is a reflection of the Hopi worldviews for it brings comfort, hospitality, safety, and provides an infrastructure to which cultural practices can be maintained.

The Hopi and Tewa people are strongly connected to their culture for they maintain with the ceremonies, language, stories, and many other cultural practices and values. Unfortunately, if life continues on how it is today with performing cultural practices only "once in a while" and the housing fails to reflect Hopi cultural needs, then soon that strong rope that ties the Hopi and Tewa people to their culture will soon be a single thread. Similarly, Jonathan Hale writes about this disconnection in his book, *The Old Way of Seeing*. He highlights the comparison between old and modern architecture,

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[206] Joanna Trevelyan, *Holistic Home: Creating an Environment for Physical & Spiritual Well-Being* (New York: Sterling Publishing Co., Inc., 1998), 6.
[207] Kimberly Dovey, "Home and Homelessness," *Home Environments: Human Behavior and Environment* 8, (1985): 33-64, ed Irwin Altman and Carol M. Werner (New York: Plenum Press, 1985).

highlighting how modern architecture doesn't come close to the feeling of being in a real place. Instead he explains how we see fragmentation, mismatched systems, and uncertainty. Creating an unrealistic world.[208] This sort of "forced puzzle piece" mindset is slowly taking over the modern Hopi housing, and other tribal nations, for the modern house design does not reflect the cultural value of connection to the land.

In the book *Reclaiming Indigenous Planning,* Ted Jojola shared a Seneca scholar's story which speaks to the time she experienced an unforgettable sense of displacement in her own house and land. She was born on the Cattaraugus Reservation in New York, during her adolescent years, a profound change was about to occur. (Fig.84)

> In 1964, the year that the Kinzua Dam inundated two-thirds of their bottomland residences. The places that many Senecas intimately knew were erased and their traditional homes razed. They were relocated into suburban-style HUD housing developments. In a short period, these new places erupted in social pathologies

Figure 84. "One of the many photographs from the time of the great removal of families to make way for the Kinzua Dam."

Source: Courtesy of the Seneca Iroquois National Museum.
https://www.pinterest.dk/pin/536561743080137763/

[208] Jonathan Hale, *The Old Way of Seeing: How Architecture Lost Its Magic (And How to Get It Back)* (Boston: Houghton Mifflin Company, 1994).

> where families were dislocated, Elders and children became isolated from one another, and new economic pressures forced the households to seek a more dependent lifestyle. In her words, 'We never knew what it was to be poor until people were moved into these houses.' This event transformed them. It undercut their culture by taking them away from a subsistence-based economy towards dependency. This new housing made them strangers in their own lands. In such instances, societies begin to lose their way. The sum of its parts does not add up to the whole. It is the worst outcome for community.[209]

This is but one story revealing the harsh truth of Indigenous peoples' history. The idea of a Hopi home, an Indigenous home, was never thought of in the past because the government was too busy trying to assimilate the Native American people. As time passed, the idea of home became less apparent in the history of Indigenous housing types.

The home serves more than the basic needs of shelter, food, and comfort. When designed with the attributes of the worldviews of the inhabitant then it will simultaneously address the deeper cultural needs and bring back the connection to home. In the book *The Poetics of Space*, French philosopher Gaston Bachelard explains the house as the corner of our world. That it is our "first universe, a real cosmos in every sense of the world."[210] David Pearson, author of *Earth to Spirit: In Search of Natural Architecture*, expresses how the new generation of architects are inspired and moving towards natural architecture. By his definition, natural architecture is the "consciousness

[209] Ted Jojola, "Indigenous Planning: Towards a Seven Generations Model," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013), 467.
[210] Gaston Bachelard, *The Poetics of Space*, trans. Maria Jolas (Boston, MA: Beacon Press, 1964), 4.

for designing, building, and living that puts us back in touch with the earth and ourselves."[211]

So what is a Hopi home? Is it a traditional house? Does the material make it a Hopi home? Is it a building that sits on top of the mesa? Does the floor plan contribute to the definition of a Hopi home? Does a Hopi home create a space where cultural values can be practiced? Is it the landscape of northeastern Arizona? Is a Hopi home the spiritual well-being of the individual? Is it memories of experiences felt during cultural moments? The answer is "yes" to all of the above.

There are "decent" houses on the Hopi Reservation and they have enough room and commodities that could house a single family but the current housing types do not

Figure 85. What is a Hopi home to me? Is it the state of Arizona? Is it the Hopi reservation? Is it First Mesa and the surrounding area? Is it the traditional Hopi architecture? Is it the modern HUD houses? The answer is "yes" to all except the last two questions. Architecturally, I haven't found my home yet.

Source: BriAnn Laban

[211] David Pearson, *Earth to Spirit: In Search of Natural Architecture* (San Francisco: Chronicle Books, 1995), 12.

reflect the definition of home. Unfortunately, many Hopi tribal members have adopted some of the cultural values of dominant American culture, including an orientation to the market of consumption and ownership. However, despite the continual challenges of disconnection and outside cultural influences, there are still some who still have retained the Hopi worldview. Speaking the language, praying, feeding, community involvement, and sharing of stories are small fundamental acts that keep the link between the people to the land, the house, and the natural phenomena. These experiences help define a Hopi home.

CHAPTER 6. HOPI HOUSING GUIDELINE

6.1 Semiotics

The Hopi language was not written until after colonization, with the assistance of non-Native linguists, so knowledge and stories have been primarily, and are still passed on mainly through oral tradition. In addition to oral tradition, the Hopi and Tewa tribe also used symbols to document history and communicate their stories to future generations. There are many different symbols. Each tells a different story, and when they are combined with other symbols they create an entirely new story. Those symbols trigger a collective memory that allows individual readers to understand the story. Currently, 2D and 3D symbols are used in Indigenous architecture in attempts to implement culture into the design. The current version of this incorporation may not be the best way, but at least the effort is there. This consideration allows us to build on the idea that semiotics can improve the connection to the home by raising the question: What if the entire house was a symbol that triggers memories and reflects cultural values, knowledge, and practice in 2D, 3D, and 4D form?

How can Indigenous architecture utilize semiotics in a more meaningful way than simply plastering symbols on surfaces? Can Indigenous architecture instead utilize semiotics in a conscious manner effective for fostering and maintaining culture within the home? In order to explore this, we must first answer the question: What is semiotics? Semiotics is a study of signs and symbols. The common definition may only conclude that it is the study of 2D signs and symbols. However, signs and symbols can represent many things, in many forms, and can transcend the popular definition expanding into the realms of 3D and 4D.

The common definition for Indigenous architecture is architecture that reflects Indigenous life visually through 2D and sometimes 3D semiotics. However, as Juhani Pallasma wrote in *Tradition and Modernity: The Feasibility of Regional Architecture in Post-Modern Society*, the incorporation of signs and symbols through a visual style approach alone does not achieve a significant level of integration. The idea is to incorporate semiotics in such a way that the design has a great impact and can be considered truly culturally conscious architecture. Pallasma wrote:

> Culturally adapted architecture is not merely a matter of visual style but of integration of culture, behavior, and environment. To deny cultural differentiation is foolish. A culturally specific character or style cannot be consciously learned and added on the surface of design; it is a result of being profoundly subject to a specific pattern of culture and of the creative synthesis which fuses conscious intentions and unconscious conditioning, memories, and experiences in a dialogue between the individual and the collective.[212]

Past and current investigations of housing on Reservations can give perspective as to why many tribes feel displaced in their own houses. One such finding is that many tribes were told across many generations that a wood frame house is the best, the most efficient, and more civilized type of house to have rather than the traditional-style homes that their ancestors lived in. However, in many cases, the wood frame houses are not the

[212] Juhani Pallasma, "Tradition and Modernity: The Feasibility of Regional Architecture in Post-Modern Society," in *Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition*, ed. Vincent B. Canizaro (New York: Princeton Architectural Press, 2007), 120. http://fluxwurx.com/placemaking/wp-content/uploads/2011/03/pallasmaa_critical-positions.pdf

most efficient.

There are many problematic issues related to the architectural design and construction of wood frame homes. Steps have been taken to address these issues during the repair phase, but cultural representation is a significant element often overlooked. In fact, cultural representation is rarely mentioned during the design and construction phase of any past or present house constructions erected on the Hopi Reservations. Making life more convenient in these wood frame homes seems like a great idea, but at what cost? One mission of Indigenous architecture is to revitalize a consciousness towards cultural values and practices. Ramona Sakiestewa writes, "The architecture, design, and atmosphere of the spaces in mind must reflect a deep understanding of Native values, sense of place, and cultural symbolism."[213] Hardly any of the HUD houses on the Hopi Reservation address the importance of implementing culture into the design. This disconnect between the house and the culture is becoming more and more evident with each passing generation. However, there are several actions we can take to revitalize this collective consciousness. Unfortunately, what is most commonly seen in contemporary Indigenous architecture is the incorporation of mere ornamentation within the exterior and interior of the design.

I strongly agree with Pallasma who believes that decorative 2D semiotics shows a lack of knowledge and respect of Indigenous cultures. I would venture as far as saying that the addition of these stereotypical southwestern designs are in fact disrespecting the depth and breadth of the culture they were intended to represent. Tribal housing programs

[213] Ramona Sakiestewa, "Making Our World Understandable," in *Spirit of a Native Place: Building the National Museum of the American Indian*, ed. Duane Blue Spruce (Washington, D.C.: National Geographic Books, 2004), 80.

and other housing organizations try to include the use of meaningful designs in an attempt to evoke cultural responses, but because they do not go beyond the basic or common design strategies, these attempts fail. In addition, tribal housing programs across the country are misusing cultural symbols in a way that deteriorates the symbol's power or purpose. For example, a housing project called the Kikunol housing project emerged on the Passamaquoddy Pleasant Point Reservation sometime before 2013. Part of the design intent was to include cultural elements into the design to honor the Passamaquoddy heritage. (Fig.86)

Figure 86. Kikumol Housing Project. "Kikunol Housing was designed with respect for Passamaquoddy heritage."

Source: "Best Practices in Tribal Housing: Case Studies 2013," accessed February, 17, 2016, https://www.huduser.gov/portal/Publications/pdf/SCIC_Best_Practices.pdf

> In the form of a semicircle, the site plan references traditional gathering protocols. The 17 multifamily homes were designed to blend with a wooded landscape and to honor symbols and shapes that are part of the Passamaquoddy heritage…Passamaquoddy winter structures, such as wigwams, were built with local materials, with their openings facing to the east—welcoming the morning sun. A decorated pole was used to prop open a traditional entry. Designed to

> blend with the wooded landscape, natural tones and curved forms mimic the bark of trees. The common area, entrances, and building designs incorporate symbols and shapes that express Passamaquoddy heritage and history.[214]

The Passamaquoddy people have inhabited the north-eastern tip of Maine for thousands of years. Their connection with their homeland has the Passamaquoddy culture rich with deep meaning and not all symbols and practices are meant for written exposure. Therefore, the brief description given through the, "Best Practices in Tribal Housing: Case Studies 2013," may only provide a portion of cultural intent information. However, further analysis of the house concludes that the Kikunol housing project is another example of the intent to implement culture only with 2D semiotics. The attempt is a noble act of the architect but without guidance or adequate research their intention becomes another stereotype.

In this way, the tribal programs and other housing organizations are causing harm to the very cultures and communities they are meant to serve. Semiotics have been used in Indigenous cultures for millennium, not merely for aesthetic pleasures but as devices for passing on cultural teachings. Now that these symbols have been commercialized, they have become trite and are losing their power. As previously stated in this dissertation, traditional Hopi architecture incorporated semiotics, such as clan symbols, which serve a purpose of welcoming clan members into a house space. There is a wealth of knowledge and plethora of symbols within the Hopi culture, but without the visual reminders and storytelling of those symbols, the deep meaning behind those symbols

[214] Jamie Blosser, Nathaniel Corum, Daniel Glenn, Joseph Kunkel, and Ed Rosenthal, "Best Practices in Tribal Housing: Case Studies 2013," *HUDUSER.org*, October, 2014. Accessed February, 17, 2016, https://www.huduser.gov/portal/Publications/pdf/SCIC_Best_Practices.pdf.

begin to disappear.

The use of 2D semiotics should not be eliminated from the definition of Indigenous architecture. In fact, they should be embraced and, furthermore, set to perform at a higher standard with intention in a way that is not superficial or stereotypical. The symbols on the buildings and drawings may, at first, only be rendered as black and white depictions but through stories and practice the deeper meaning will begin to emerge as actions and practice for the inhabitants of the house. HTHA and other tribal housing programs have the responsibility of serving as knowledge brokers that truly work to represent the tribe and its cultural needs. Adequate research must be done in order to access that knowledge and those symbols in order to use them in a meaningful way.

In order for Indigenous architecture to achieve its goal of accommodating, incorporating, and truly fostering culture, there needs to be a more conscious and intentional incorporation of 2D, 3D, and 4D semiotics embedded in the design. As Umberto Eco stated, "A phenomenological consideration of our relationship with architectural objects tells us that we commonly do experience architecture as communication, even while recognizing its functionality."[215] Therefore, I believe that 3D and 4D semiotics in Indigenous architecture can be active tools that help communicate traditional values and knowledge by facilitating opportunities of remembering and, furthermore, accommodating the practice of culture.

[215] Umberto Eco, "Function and Sign: The Semiotics of Architecture," in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach (London: Routledge, 1997), 182.

As children, we are offered the top layer of cultural knowledge through 2D symbols that appear on 3D objects that are given to us. A few examples are the lighting stick, Kachina dolls, bows and arrows, *masanpi,* and other important objects. These objects are learning tools that connect children to the dances, songs, and Hopi values. There is also a deeper meaning embedded within these objects. As the children grow older and, when they are ready, they are offered more knowledge about these objects and other things.

Figure 87. Hopi Lighting Stick.
Source: BriAnn Laban

The following text is based on a discussion I had with my father about semiotics. The object discussed was the Hopi lighting stick. (Fig.87) His intention was for me to understand that there is more meaning beyond what we see. As we began the discussion, we focused on how children are told that the shape of a lightning stick and its painted symbols signify a new cycle of rain. The form and symbols can trigger memories, songs, and cultural values that the youth will later pass down to the future generations. Today, there are several forms of the lightning stick and each one expresses this teaching. One popular form is repeated triangles or diamonds and, while other forms may be zig-zagged, all have painted symbols.

My father and I discussed the different forms and painted symbols, and I expressed that maybe the forms were to represent the zig-zag shape that the lightning

creates when it strikes the earth. My father retorted by asking, “If the zig-zags were solely to represent lighting, then why aren’t lighting sticks just in the zig-zag form and nothing else?” I pondered perhaps it could have been because the tools to carve a zig-zag form wasn’t available when the first lightening stick was created, therefore, our ancestors would have had to paint the zig-zag form on the stick. Whatever the case may be, the semiotics of the lighting stick are there, giving us important knowledge of the environment, seasonal cycles, ceremonies, and possibly more than what we can read or understand now.

One of the interpretations we discussed was: What if our ancestors had an idea of the structural system of our DNA? What if the reason they chose this shape was not only to tell us about the significance of the lightning and its connection to rain and our ceremonies, but also to try to trigger our memories of a knowledge that they knew we would forget? Our ancestors knew that our present generations would be separated from their wealth of knowledge as a result of colonization and they prepared for this by embedding their knowledge into these physical objects, which they knew would last longer than their own lives. Today, science and research are working to “prove” Indigenous knowledge and philosophies correct. Our ancestors lived their culture daily. They worked hard every day with farming, hunting, constructing, and ceremonies. Their actions that tied them to their cultural values and practices. This daily integration and practice allowed them to reach a higher understanding of the universe and how it operated, and how we operated within it.

Indigenous architecture can serve the same purpose with the inclusion of culturally conscious semiotics. This is not a new concept. Western architecture has

already reached this higher understanding, and one prime example is that of cathedrals. Clifford Geertz further explains:

> Our ideas, our values, our acts, even our emotions, are, like our nervous system itself, cultural products—products manufactured, indeed, out of tendencies, capacities, and dispositions with which we were born, but manufactured nonetheless. Chartres is made of stone and glass. But it is not just stone and glass; it is a cathedral, and not only a cathedral, but a particular cathedral built at a particular time by certain members of a particular society. To understand what it means, to perceive it for what it is, you need to know rather more than the generic properties of stone and glass and rather more than what is common to all cathedrals. You need to understand also—and, in my opinion, most critically—the specific concepts of the relations among God, man, and architecture that, since they have governed its creation, it consequently embodies.[216]

The cathedral acts as a conscious semiotic that triggers the deeper meaning of the church and helps promote practicing those values and sustaining that knowledge. There are a lot more examples of architecture serving as a symbol that helps connect the people with their culture. Unfortunately, architecture, especially architecture on the Reservations, has declined to the state of merely using 2D representation as the quickest and easiest solution to implement "culture" into the design. Sometimes signs and symbols are used carelessly and placed on surfaces just to meet the requirement of having cultural intent, which, as previously stated, does a disservice to the tribal communities.

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[216] Clifford Geertz, *The Interpretation of Cultures: Selected Essays by Clifford Geertz* (New York: Basic Books, Inc., Publishers, 1973), 50.

The "quick solution" mindset to implement culture into the house design on the Reservations has now become a problem within a problem. The past and present housing solutions created a wood frame, cookie-cutter housing type that is based on the idea that this style of housing can be placed anywhere despite the ability to adapt to its location, to the user's needs, and their worldview. Basically, setting a standard code that eliminates any room for any creative solution to tribal housing. These standards are followed by U.S. Department of Housing and Urban Development (HUD) which create low-context housing for high-context tribes who's Tribally Designated Housing Entities (TDHE) is linked with HUD. Edward Hall explains further in his book, *Beyond Culture,* the difference between high-context and low-context:

> High-context messages are placed at one end and low-context messages at the other end of a continuum. A high-context (HC) communication or message is one in which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the message. A low-context (LC) communication is just the opposite; i.e., the mass of the information is vested in the explicit code…Context, in a sense, is just one of many ways of looking at things. Failure to take contexting differences into account, however, can cause problems…HC cultures make greater distinctions between insider and outsiders than LC cultures do. People raised in HC systems expect more of others than do the participants in LC systems.[217]

[217] Edward T. Hall, *Beyond Cultures* (New York, NY: Anchor Books, 1976), 85-116.

In other words, low-context cultures are "cultural beliefs and practices that are made explicit in laws, rules, etc".[218] High-context cultures rely on the "people having close connections over a long period of time and the context is not made explicit".[219] Basically, high-context is a strong reflection of who we are, our way of life, our belief system. We are many, we are not the same, we are not just one tribe, we are all unique and not a stereotype. In chapter three of *New Architecture on Indigenous Lands*, Joy Malnar briefly mentions the idea of low-context and high context culture in architecture. She writes,

> With the arrival of Europeans the Kwakwaka'wakw were forced to adopt European styles of housing, largely through various forms of coercion rather than choice. According to the 'Namgis Nation, 'In former times, [when] the belief system[s] of the Kwakwaka'wakw were such an integral part of their everyday live, everything was spelled out and clearly understood, they didn't need a ceremonial house to keep things in order. However, with their ever-changing world, and their belief system slipping away, the Big House was instituted specifically for conducting ancient rites and ceremonials, to help the Kwakwaka'wakw to retain important aspects of their heritage, to keep things in order.' Thus has Kwakwaka'wakw culture, on the verge of becoming low-context, employed the use of a building type to maintain their high-context way of life."[220]

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[218] Peter Merholz, "Information Architecture: Low-context Practice in a High-context Culture," *Adaptive Path*, November 14, 2006. Accessed September 17, 2017, http://adaptivepath.org/ideas/information-architecture-low-context-practice-in-a-high-context-culture/.
[219] Peter Merholz, "Information Architecture: Low-context Practice in a High-context Culture," *Adaptive Path*, November 14, 2006. Accessed September 17, 2017, http://adaptivepath.org/ideas/information-architecture-low-context-practice-in-a-high-context-culture/.
[220] Joy Monice Malnar, and Frank Vodvarka, *New Architecture on Indigenous Lands* (Minneapolis London: University of Minnesota Press, 2013), 43.

There are many Indigenous tribes in north America and every single tribe has a high-context culture. There are so many ways to represent Indigenous architecture which makes it complex; however, the many high-context cultures among Indigenous tribes are not being represented in Indigneous architecture, especially in modern Hopi housing.

Contemporary Indigenous architecture will take several aspects of culture that are important, implemented it, and state that it is culturally appropriate. Part of cultural appropriation is not only censoring sacred knowledge but eliminating cultural stereotypes. For instance, a lot of Indigenous architecture is implementing the east-facing door into the design. However, the extent of the east-facing design effort is limited to only placing the door on the east side of the house. Simply having the door entrance on the east wall is only a portion of its significance. Having an east-facing entrance is a physical cultural representation in Hopi architecture, and it serves as a 2D, 3D, and 4D reminder of why it is important. In order to attain those deeper meanings, as previously stated in Chapter 3, traditional Hopi homes were also oriented to the east. Current Hopi houses are all oriented in different directions (Fig.88), some are oriented to utilize passive solar design. Some of those houses may have east-

Figure 88. Awareness to orientation. The HUD houses are facing in various directions, with only a few east-facing doors.

Source: BriAnn Laban

facing doors and utilize passive solar design, but without further efforts the east-facing door will become a design feature that only needs to be located on the east side of the house. Orientation, circulation, usage, deeper meaning, and spirit of the house will no longer be remembered if this quick-fix of a design continues. Leigh Kuwanwisiwma iterate:

> *So architecturally, in terms of the orientation, that's what I find kind of disturbing for me because now they are all different ways and we don't really know why east anymore. Our housing authority needs to be told that they need to really consider these homes to be orientated that way, to the east. But that would require a good educational component not just to them but to the families. Especially to the younger couples who are wanting homes. They need to be enrich and they need to feel Hopi and Tewa because that's what the culture is, in terms of the orientation of the home.*[221]

Just having an east-facing door in the design not only creates a stereotype but, if it is done improperly, it can cause the Hopi and Tewa people to forget the 3D and 4D meanings behind why they have the house and entrance oriented to the east to begin with. Many Indigenous tribes have the same cultural value as the Hopi of having an east-facing door, but

Figure 89. A house design of the Crow Good Earth Lodge project located at Crow Agency, MT.

Source: "Best Practices in Tribal Housing: Case Studies 2013," accessed February, 17, 2016, https://www.huduser.gov/portal/Publications/pdf/SCIC_Best_Practices.pdf

[221] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

they also have deeper meaning within their own architecture that may differ from Hopi architecture. Therefore, the need for high-context thinking needs to be considered among architects and designers because without it, the east-facing door will only become a meaningless 2D representation on the construction documents and the east façade of the house. (Fig.89)

Indigenous architecture should also be an experience of the senses. Rina Swentzell provides her perspective, “In this movement, all senses were utilized. Each of the various dirt surface (interior walls, outdoor walls, plaza floor) were touched, smelled, and tasted.”[222] Swentzell’s explanation is the same sensation that Hopi and Tewa elders felt when they move barefooted on the interior dirt floors enclosed by mud walls packed with smooth dirt. The earthen material stimulates their senses. The visual representation of each sandstone wall has a unique pattern and each pattern balances with the landscape. The feel of the rocks gives a sense of the landscape, the roughness and smoothness of the world they live in. The dirt smell, especially when it is wet, smells like it is clean. That clean smell tempts you into wanting to taste the earthen wall. “The walls with clay and that aroma of that wet clay is still in my mind because it smelled good and you just wanted to go over there and you did go over there and licked the wall.”[223] These sensations are an example of how 4D semiotics can be reached with the assistance of 2D and 3D representation.

[222] Rina Swentzell, "Conflicting Landscape Values: The Santa Clara Pueblo and Day School [Vision, Culture and Landscape]," *Place Journal 7*, no. 1 (1990), accessed January 09, 2017, https://placesjournal.org/assets/legacy/pdfs/the-santa-clara-pueblo-and-day-school.pdf.
[223] Stewart Koyiyumptewa, interview by BriAnn Laban, Hopi Reservation, November 2016.

The Hopi and Tewa come from a land that is hot, dry, cold, sandy, and harsh. The people have lived here for centuries and never chose to leave. Rain is important to the Hopi and Tewa people, for it brings life: life to the land, life to the corn, and life to the people. The rain on the Hopi Reservation does not last very long. It comes and teases us with its precious resource, dropping down from the sky in slow motion trying to prolong the experience. The rain isn't hard, it isn't abundant, and it isn't heavy. It is small, it is gentle, and it is pleasant. Tip tap, tip tap, a rhythm develops and you can't help but want to stand out on the porch to watch the beautiful performance. A sudden flash of lightening catches the eye. *One Mississippi, two Mississippi, three Mississippi, Bang!* A thunderous roar is heard throughout the landscape and, according to the Mississippi rule, it is three miles away. A Tewa story teaches you that your hair will grow long and beautiful if you grab your hair and pull at it during the sound of thunder while saying, "Kwang." Another flash of light catches the eye and, shortly after, another loud thunder is heard. *Kwang! Kwang! Kwang! Kwang! Pull!* Now your hair will grow long and pretty.

The beauty of the clouds, the lightening, and the rain are wonderful, but the best part is when the rain hits the desert floor. An explosion of wet sand smell penetrates the nostrils, overpowering all other smells. Some people think the smell of Pine-sol or lemon symbolizes cleanliness; however, many Hopi and Tewa people think the smell of wet sand is the smell of freshness, cleanliness, and purity. "Iss eli man," that is the best smell of all time. As to be expected, the rain doesn't last long, only providing enough time to water the ground, enough time to replenish the corn, and enough time for everyone to

enjoy the rain before it continues its journey along the desert landscape. It leaves behind many smiling faces and intensive, repetitive inhaling.

This is just one example of how the senses are provoked in a desert landscape. These sensations help to define the idea of home, a true Hopi home. Bringing these sensations into Indigenous architecture can connect the inhabitant to their home. The cultural significance with that is keeping the people and their hearts and spirits connected to the land, connected to home. In architecture we talk about connecting the indoors to the outdoors. However, merely having a big visual opening isn't the only way to go about connecting indoor and outdoor worlds. If Indigenous architecture embraces all types of semiotics then there is a chance to truly define what Indigenous architecture should be.

6.1.1 Land – Tutskwa – "Land, Everything on It"

Figure 90. Hopi Housing Guideline – Site.
Source: BriAnn Laban

"It's not just a home for us per se but it's a home for all human kind and for all life and, in that way, we all worldwide share that connection to this land…We're always putting out food or prayer feathers. Thank you for giving all of that to us. We're always grateful for that. And so that just our way of showing that gratitude by continuing to use it. Because, like with herbs and plants and things they say that when we quit picking them we're going to make them sad and make them feel like they're not useful anymore and then they'll just disappear. Also at the same time not to deplete them at the same time, not to over use them so that there's no more. The balance of all those things."[224]

[224] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, October 2017.

Clan System - Matrilineal

Figure 91. Clan houses at Walpi Village

Source: Nabokov, Peter, and Robert Easton, "Walpi," in *Native American Architecture*, Oxford: Oxford University Press, 1989.

Land, and everything on it, is sacred to the Hopi and Tewa people. Therefore, the purchasing of land is not a practice that is seen on the Hopi Reservation. The Hopi and Tewa people believe that land is not something that can be owned. However, they are organized on the land according to their clan. It is said that when the Hopi people emerged into the fourth world they were greeted by Masauwu, the caretaker of this world. They were told that in order to live in the fourth world they must first complete their migration journey. Many years have passed and many villages have been established and abandoned and reborn again, but the permanent home was not yet found until the Bear Clan came upon the land that is now the current Hopi Reservation.[225]

From the sacred tablets that were given to the people, they recognized that the land was sitting at the center of two large rivers and three mesas rose upward from the

[225] Frank Waters, and Oswald White Bear Fredericks, *Book of the Hopi* (New York: The Viking Press, 1963).

upland plain.[226] Here is where the Bear Clan made plans to establish their permanent home. As time passed, other clans were completing their migration journey and, eventually, coming upon the land that they recognized as their permanent home. Understanding that the Bear Clan were the first to settle, the preceding clans would ask to be reunited with their forefathers' brothers.[227] Great planning and preparations were made in order to continue the balance between each clan's roles and responsibilities. However, each clan had a joint responsibility and that was to be caretakers of this land, as Masauwu instructed. The clans were organized in accordance to how they would help the village progress. Once the clan's established land boundaries were made, the clan system further organized the land allotment system within their own clan by allowing only the women to attain land.

The clan is an important identity marker for the Hopi and Tewa people. Your clan shares information of what family you are a part of, the responsibilities that you carry, the other clans that you are related to, and where you must have your house and field located. How one inherits a clan is through the mother; therefore; making the Hopi and Tewa a matrilineal society. In the conventional western society, majority of the customs follow the man, making it a patrilineal society. Generally, it is the man that purchases the house and possible owns it. However, in Hopi and Tewa culture, the women are the ones to inherit the land so they can build their house. The inheritance isn't a reward, it is a greater understanding that the clan is and should be carried by the women because she is the caretaker of the family and the hope that will carry on the Hopi way of life.

[226] Waters, 109.
[227] Ibid., 85.

> *The husband is always the guest. That's what they say, you're just a guest. It reinforces our matrilineal system. We come through the female, our identity. So, the home just simply reinforces that because if you know this thing and thinks about it and feel good about it, it makes you feel Hopi, it makes you feel Tewa because we are a matrilineal and matrilocal system. Matrilocal is where a Hopi husband has to go to the bride's village.*[228]

The mother raises the boy for other people, for their future family. To be strong, helpful, humble, and loving towards their new family. When they aren't with their family, their place is in the Kiva, that's what they are responsible for. The role between men and women are balanced in that way. However, an unfortunate, unconventional reason has emerged. Verna Nahee, a Hopi and Tewa elder, explains.

> *I wonder sometimes, we're all Sand Clan in this subdivision and it's because this is our land. We couldn't just go build anywhere else, well maybe we could try but no! The thing that they tell us is if you want to have a home built somewhere, off the mesa, you go to your own uncles and tell them what you want. And they say 'Ok, if that's what you want you're staying in our land. You're not going to build on your husband's land because that's not your land.' He's supposed to build your home on your land and not on his mom's clan land. Why? They said, "If your husband no longer wants you he can get rid of you because that's not your land and that's not your home.' That's it, you have to make your home build on your land.*[229]

[228] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016
[229] Verna Nahee, interview by BriAnn Laban, Hopi Reservation, November 2016.

It is a shame that this reason has emerged more dominantly over time. I am sure our ancestors had marital problems a long time ago as well, but the Hopi values and teaching are no longer commonly inherited. Instead the influence of western culture and social media has portrayed an independent life away from the Hopi values of the clan system.

As time moves forward, Hopi life changes due to the approach of development and influence of Western culture. One Hopi participant stated, "If you want to kill a culture fast, remove them from their villages."[230] History and current actions have shown the cultural gap is drastically different between individuals who live in the village, compared to the individuals who live farther away from their village. Ted Jojola iterates that this connection is due to the planning method that many Indigenous tribes have adopted. He states:

> This state of affairs has been described as 'attemptive planning.' This is characterized by development within tribal lands that is both discontinuous and disconnected. It is the result of community development that reflects incremental and reactive planning, which, over time, creates a settlement where the parts of the community are disparate from one another. They neither add up to a meaningful whole nor create a sense of place.[231]

The emotional, physical, and spiritual connection between the people and land may be damaged by the attemptive planning that is occurring on the Hopi Reservation. Planning done with New Zealand Māori is based on the care they dedicate to embodying their

[230] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, November 2016.
[231] Ted Jojola, "Indigneous Planning: Towards a Seven Generations Model," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013).

worldviews within the contemporary notion of planning.[232] The Hopi people are fortunate to have a clan system that helps with planning but it is done with a combination of attemptive planning as well. The HTHA and other organizations still follow how the clan system allots land. If a female clan member wants to build her house, she needs approval from the clan leader and must be given a site within the clan boundaries. (Fig.92) Once this is accomplished, the consensus is that the clan member is now responsible for that land. They must care for that land and put their farm field there as well.

Figure 92. Sand Clan Subdivision. Expansion of home ownership.
Source: BriAnn Laban

Much of the housing today are scattered around the Reservation. The families may be on the clan's land but many of them are not connected due to the large physical gap between one another. More extensive planning is needed because the current results are disconnecting the Hopi and Tewa people from each other, their cultural value, and their connection to the land. Gloria Navenma, a female Hopi adult, sees this disconnection below the mesa and she shares how part of that blame is contributed to the modern conveniences that many Hopi and Tewa residents would like in their houses.

[232] Tanira Kingi, Liz Wedderburn, and Oscar Montes De Oca, "Iwi Futures: Integrating Traditional Knowledge Systems and Cultural Values into Land-Use Planning," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013).

Figure 93. Attemptive planning, clan system, and modern conveniences has created the scattered-housing system that is seen throughout the Hopi Reservation. Image location: Polacca, AZ.

Source: BriAnn Laban

I think that everybody wants to be, the younger ones, wants to have all these conveniences. I don't know how others feel, but moving down the mesa makes you move away from your tradition, from your culture, and from how you grew up in the village. Now our kids are growing up in modern homes and it becomes a burden. The differences between living in the housing and when you're up in the village, when somethings going on, is the village is lively. It brings you back to your memories of how it was a long time ago, when you grew up there. Now we're down the mesa and we don't speak to each other like here, in the village. Everybody's kind of in their own world. And now it becomes a job when we have to move things up here, back and forth.

It's kind of not good too when we say we only come up on Friday. And then the dance is over Sunday and everybody is moving back down. It makes the village dead. It's kind of sad that where we grew up and where we were placed, we deserted it only because we wanted all the conveniences. We didn't think about our poor village. We want to have these conveniences and we neglected our

> *village. So why do we say that's our value, well if that's our value why did we choose this. It's kind of hard and it's all because of the conveniences. And I think that's where we lose our traditions because nobody seems to be as active and not into the traditional ways. I guess it varies too from village to village.*[233]

Moving off the villages for these modern conveniences may have been the reason in the beginning, but many off these modern conveniences have now been adopted and aid in some traditional activities. These modern conveniences are features that many homeowners and potential homeowners want to have in their houses. However, we have come to the point, as a community, where we need to return back to our Hopi values below the mesa.

Long ago, no unplanned construction of new buildings was ever made. Everything had a reason for its place and, if it didn't have a reason, then it wouldn't be supported by the village. Similar ideas need to be implemented in today's and future planning. Before any home can be built there needs to be communication with the clan members surrounding the proposed property. This helps create a deeper understanding of the clan system beyond the kinship knowledge that everyone knows. The clan member must understand the responsibility they will take on when they decide to build their home. The land's purpose is not merely to provide a physical space for a house. The clan members must understand the connection they are creating with the land that is providing them a place for their home and field. They must remember that everything has a purpose. If they do, the process of recreating that tie with the land begins again.

[233] Gloria Navenma, interview by BriAnn Laban, Hopi Reservation, November 2016.

Inside/Outside Relationship

Architecture is always trying to create the indoor and outdoor relationship. Large windows or patio doors that frame a picturesque viewport of the landscape create this phenomenon of connecting to the outside through visual stimulation. Another practice is

Figure 94. Kwang'wa Tsoki Orchard Restoration Project. Hopi Tutskwa Permaculture Institute.

Source: "Kwang'wa Tsoki Orchard Restoration Project," Digital image. *Hopi Tutskwa Permaculture Institute,* accessed May 02, 2017, https://www.hopitutskwa.org/kwanwatsoki-orchard-restoration-project.

by actually creating an opening between the inside and the outside. This could be accomplished with courtyards, aesthetically pleasing back yards, and deck space. These spaces not only create a community gathering space but also connect the people back to the environment. However, these types of methods do not really reflect the Hopi worldview.

Large windows or a backyard is not seen in traditional architecture. Even when these concepts are implemented in modern Hopi housing, they are not utilized in a sense. The windows are usually drawn closed with curtains and the "backyard" is a boundary that doesn't exist. A true indoor and outdoor relationship, in the Hopi perspective, is actually going outside and engaging with the land and the outdoors. For example, what I have come to understand about the east-facing door is just one part of its significance.

Having an east-facing door allows the Hopi people to put into practice their value of praying and greeting the sun every morning. The door then acts as a connector between the land and the cosmos. Mother Earth and Father Sun are greeting each other every morning. The home is a part of Mother Earth, further illustrating our deep connection with earth. The individuals within the house were not the only ones who greeted the sun. The house also greeted the sun. The house greeting the sun is a 3D symbol that is no longer seen in modern Hopi housing, which contributes to the people forgetting the importance of the house. Contemporary Hopi people's housing needs have aligned with superficial mainstream American views as people are wanting more space, better appliances, more rooms, better heating, and cooling systems, and other culturally insignificant features. Without these Indigenous semiotics, we forget how important the house really is for our well-being and how it truly works to keep us connected to the earth.

Other outdoor and indoor engagement can be with the types of work that is done outside. For the case of the Hopi and Tewa people, work isn't seen as a burden or simple survival actions because everything that they do is an extension of their values and life lessons. Bernita Duwahoyeoma, a female Hopi elder, shares her story:

> *In this, a Hopi home, the yard is an extension of that family life …We're talking about your piki house, your bread oven and your pik'amkoysi. Of course, you're still going to need a wood pile; for example, for a wedding. So, in constructing these homes you really do have to look at quite a lot more than just a living space.*

It has to be able to provide for the purposes of the culture and in that way, you know you're not limiting the culture, in fact you're promoting it.[234]

The indoor and outdoor relationship can be represented in many ways such as planting, cooking, roof terraces, cultural art practices, and community planning. With cultural values in mind, this makes it a little easier to create these types of connection. If these cultural transitions from inside to outside become a part of the design then the relationship with the land strengthens.

Farming

Figure 95. Hopi dry farming. Hopi Reservation, AZ.
Source: Sam Tenakhongva, Hopi Tribal member, 2017.

The number one job for a Hopi is to be a farmer. Farming not only provides the nourishment that is needed to sustain life in the desert landscape, but it also connects the Hopi and Tewa people back to the earth. Sam Tenakhongva, a Hopi member from the village of Sichomovi shares his story:

[234] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, October 2017.

Corn is symbiotic and symbolic of our life. The corn seed is planted and life is born. Therefore you're the caretaker, you become responsible, you're the parent. So that's what we call…our kids. Our corn are our children. So we put it in there [the earth]. We give life…and we become responsible for taking care of that life. So when they come up and you see parts of it, you see the first one, the yellow part, the yellow tips come up. Kuyva, it's coming up. It's starting to bear. Now life starts happening. As a small kid, as an infant, the leaves first touch the ground. So what do we do as a kid? We crawl first, we touch the ground around us. We explore. We don't know what's out there. Things can hurt us, things can harm us. You have the wind, the harsh sun, no rain, animals, insects, all of these things because that's life there. They're looking at the plant and they're trying to take something from that to nourish their own life. But somehow that corn, if you take care it, you watch over it, it grows. Now you got this corn that is growing, and, it doesn't have any tassel, it just has the stalk, no ears, so you can say they're adolescents, the young corn. And then it starts to get the tassels, the ears, that's when they become teenagers and the young person's life. They're being able to bear life now. They're at that stage. As they grow older they grow taller, that's the height of our life, we're standing up nice and tall. We're nice and strong, we're able to withstand a lot of different things. Something can come in and harm it, but we're able to get past that. Then we're at the point of where it's the harvest now, slowly that corn that used to be tall starts coming back down, it's drying, it's shrinking. Just like old age, old people start getting smaller. Pretty soon that corn starts hunching over, it's just like an old person, so it starts hunching over. We

take the life from it. That corn is a fully matured, it lived a whole life, it's able to bear fruit, and it still leaves us with something at the end, which is that mature corn, that we can again give life at the next year. We take that, we bring that in, we nourish ourselves. But we don't just leave the corn there…even though all of them didn't have an ear, I make sure to go to each one and lay it down. That's when you're putting it back into the earth. It's kind of like a process of a funeral. You're putting it back down. Letting it go back into the earth. So that's the whole thing of corn. That's where it starts. That corn is symbiotic, because, for Hopi, our naming, that tsotsmingwu, that perfect ear of white corn, there's nothing wrong with it. That's the kind of life we want our kids to live. That's what we want for them. So it's given. That corn is there from the very first day you're born to the very last day you leave this earth. Your head is washed with that tsotsmingwu when you're born. Your hair is washed again with that tsotsmingwu when you go onto the next life…That's all our goal is to become that old person that's hunched over. That when we get our job done here for the people, we are laid back down and return back to the earth.[235]

This story emphasizes the importance of being a farmer. It teaches you important practices and the responsibility you have with the land, reiterating the connection that Hopi and Tewa people have with the earth. Therefore, incorporating a field or garden in the design of a Hopi home must be added in some way in order to preserve this cultural practice and understanding of self in relation to the earth.

[235] Sam Tenakhongva, interview by BriAnn Laban, Hopi Reservation, October 2017.

Sipapu

Again, earth is sacred to the Hopi and Tewa people. They are responsible for taking care of the land around them. Incorporating the clan system, indoor/outdoor relationship, and farming values into the design creates a balance between modern and traditional living. The next step of reconnecting the Hopi and Tewa people back to the land is to incorporate the idea of "stepping down" back into the earth. This concept is deeper and more spiritual than I am allowed to write here, but the general concept is that stepping *down* into the home instead of stepping up, which is typical in modern housing, creates a deeper meaning and connection to the home and the land. That is as far as I can explain about this design concept but if we, as designers, keep this idea of stepping down into the home in mind, then that is all the information that is needed.

6.1.2 Language – Lavayi – "Language"

Figure 96. Hopi Housing Guideline – Language
Source: BriAnn Laban

The remarkable thing about language is that it has the capacity to carry a large sum of meaning within one word. It is important to remember that each language group belongs to a form of culture. Larry Kimura states that, "When translating [the Hawaiian] language into English we need to keep in mind that the English language is carried by its own culture and that culture holds its own connotations while (unintentional or not) eliminating any intended meanings of the original."[236] The Hopi and English language are drastically different from one another. In an effort to adhere to Western culture and resist the idea of a forgotten language, the Hopi dictionary was created to keep up with

[236] Larry Kimura, "Native Hawaiian Culture," in *Native Hawaiians Study Commission Report on the culture, needs and concerns of Native Hawaiians Pursuant to Public Law 95-565, Title III*, vol. 1 (June 23, 1983): 182, http://files.eric.ed.gov/fulltext/ED254608.pdf.

the cultural shift. This is a written attempt to preserve the Hopi language. The dictionary is a tool that helps schools with teaching the Hopi language in the classrooms. However, teaching of language needs to extend beyond the classroom. Leigh Kuwanwisiwma explains:

> *The other piece is it's really around language too. The tribe is suffering from language loss. You don't have Hopi being spoken predominantly anymore in the home, it's English that has become dominate in our day to day conversation. We believe that the only language that the home knows is Hopi. That's the other intangible, when you converse in Hopi it becomes a part of this bigger cultural environment that makes you Hopi, but now it shifted dramatically. I think about a lot of these little things, subtle but not so subtle, cultural things that does make a home a home.*[237]

With the assistance of visual representation in the home, the language then provokes storytelling. These stories then teach the Hopi and Tewa people of their values and importance of putting those values into practice. The language is a learning experience that teaches us not to do the bad things and to improve on the good things. The inclusion of a simple word like *lestavi, tuuma, kitso'vi, saaqa,* and many others is not just a simple word, because it operates on a deeper level by evoking all the 2D, 3D, and 4D semiotics.

Hopi Architectural Terms

Below is a collection of Hopi architectural terms that was provided by the Hopi Cultural Preservation Office. This list can and should continue to grow. For now, this is a great starting point that can help assist the Hopi design process.

[237] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

Hopi Architectural Terms
Compiled By: Stewart B. Koyiyumptewa and Leigh J. Kuwanwisiwma
Hopi Cultural Preservation Office

Aapavi ..... Front room
Hö'i ..... Height or depth
Hötsiwa..... Opening or Doorway
Kii'ami..... Roofing material
Kiiqalmongwa/Kiqalmo .....Top layer of rock on the walls of a house, just below the eaves
Kiisakwi..... A state during which a house is falling apart, not yet in ruins
Kiskya..... Alley way
Kiva ..... Underground chamber
Kòltsi ..... Stone shelve built into the wall
Kòokuyna/wunakòokuyna.....wooden peg in the wall
Taqatski ..... Ramada
Tsakwani..... Patchwork of mud
Tsaqapvoksö ..... Chimney made out of pottery
Tuleta..... Storage Beams
Tuhö'pavi/Töhö'vi.... Three sided storage area
Tuma ..... Piki stone
Tumtsokki..... Piki house
Tumu'at/Tamu'at..... A piece of rock/board above the doorsill
Tumvoksö/Kwitski.... Chimney for piki house
Wuna't..... Small cross poles in roof construction
Kookwits'iwta..... Soot marks on wall
Kyeevela..... Ceiling
Lestavi ..... Wooden roof beams
Mata..... Grinding stone
Mataaki..... Grinding tool
Palqakni..... First layer of mud plaster
Palwi'at..... Plastered (White wash)
Panptsa ..... Window
Pawihaypi/Pavahahaypi .....Roof drain spout or channel
Poksö/Siwvoksi..... Little opening in the walls for view and wind draft
Pölavik'ki ..... Bread oven
Qantupha..... Floor
Saaqa ..... Ladder
Tapu'ami..... Kiskya covering or bridge
Tupatsa ..... Second story house
Tutuvenga/Tutuvönga Stone stairway
Tùukwa..... Wall (manmade)
Tuuwi ..... Seating area along wall built with stone
U'utspi..... Door (to close off)
Wìikya/Kiqalmo..... Eave – the part of the roof which protrudes outward
Wunakwappi..... Secondary beams, small cross poles resting on the lestavi
Wuwukpi ..... Step
Yuupovi..... Inner room

Figure 97. Location of Hopi Architectural terms. Image 1.

Source: "Terrace scene on the streets of Oraibi," accessed September, 17, 2017. https://commons.wikimedia.org/wiki/File:PSM_V55_D755_Terrace_scene_on_the_streets_of_oraibi.png

Figure 98. Location of Hopi Architectural terms. Image 2.

Source: Milton, Snow. "Girls grinding corn in Puberty Ceremony, Shongopovi Village," 1949. Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives. http://archive.library.nau.edu/cdm/singleitem/collection/hcpo/id/1760/rec/1.

Figure 99. Location of Hopi Architectural terms. Image 3.

Source: "Hopi Women Building a House in Oraibi," circa 1904. USC Digital Library. http://digitallibrary.usc.edu/cdm/ref/collection/p15799coll65/id/15429

Figure 100. Location of Hopi Architectural terms. Image 4.

Source: Milton, Snow. "Boys spinning Hopi tops. Shongopovi Village," 1944. Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives. http://archive.library.nau.edu/cdm/singleitem/collection/hcpo/id/1664/rec/1.

Figure 101. Location of Hopi Architectural terms. Image 5.

Source: Milton, Snow. “Archie & Nellie Quamalas House. Shongopovi Village,” 1944. Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives. http://archive.library.nau.edu/cdm/singleitem/collection/hcpo/id/1722/rec/1.

Figure 102. Location of Hopi Architectural terms. Image 6.

Source: Milton, Snow. “Blanch Tewanima making piki - Shongopovi Village,” 1944. Hopi Cultural Preservation Office: Northern Arizona University Special Collections and Archives. http://archive.library.nau.edu/cdm/singleitem/collection/hcpo/id/1515/rec/1.

Place-Names

Land is an integral part of the Hopi home. Place-names are incredibly important because they hold and speak to the identity and the history of the Hopi people. The migration story is important and it is a story that is given not only to the Hopi people but to everyone. In the story, a lot of place-names are mentioned because different events occurred at different locations, and most of the events are sacred. Knowing these place-names, some of whose locations can be seen on the Hopi Reservation, aid in the connection to earth and the transmission of cultural knowledge. The home is not just the physical house. Home is the land, the earth, the Hopi Reservation, and these place-names, because we have a strong connection to all.

Place-Names

Compiled By: Sam Tenakhongva

First Mesa Elementary School

Homol'ovi..... "be mounded up" – Winslow

Kawestima..... "katsina home to the northwest" – Navajo National Monument: Keet Seel

Kiisiwu..... "katsina home to the northeast" – Shadow/Cliff Springs

Koyòngkuktupqa ..... "turkey tracks canyon" – Canyon de Chelly

Nuvatukya'ovi ..... "katsina home to the southwest" – San Francisco Peaks

Öngtuqpa/Sakwatupqa..... "salt canyon" – Grand Canyon

Salapa..... "spruce springs" – Mesa Verde

Toko'navi ..... "center of the rock" – Navajo Mountain

Tusaqtsomo ..... "grass hill" – Bill Williams Mountain

Weenima ..... "katsina home to the southeast" – Zuni Salt Lake

Yupkoyvi..... "the place beyond the horizon" – Chaco Canyon

Figure 103. Nuvatukya'ovi – "katsina home to the southwest" – San Francisco Peaks

Source: “San Francisco Peaks,” accessed September 16, 2017. https://commons.wikimedia.org/wiki/File:San_Francisco_Peaks.jpg.

Figure 104. Toko'navi – "center of the rock" – Navajo Mountain

Source: “Navajo Mountain, UT,” accessed September 16, 2017. http://www.city-data.com/picfilesc/picc31735.php.

Figure 105. Koyòngkuktupqa – "turkey tracks canyon" – Canyon de Chelly

Source: “Spider Rocks and Canyon de Chelly,” *The American Southwest,* accessed September 16, 2017. http://www.americansouthwest.net/arizona/canyon_de_chelly/national_monument.html.

Figure 106. Salapa – "spruce springs" – Mesa Verde

Source: “Mesa Verde National Park and the Durango and Silverton Railroad,” *Road Scholar,* accessed September 16, 2017. https://www.roadscholar.org/find-an-adventure/1263/mesa-verde-national-park-and-the-durango-and-silverton-railroad.

Storytelling

Today, there are many tools that assist in recording important events, knowledge, and stories. In the Western perspective, it is highly encouraged to document everything and anything for the purpose of preserving and keeping its authenticity. With easy mobile phone applications like Facebook, Snapchat, and Instagram, it is easy to record everything at any given moment. These applications then become a tool that makes the process of learning lazy. This provokes thoughts like, "I'll do it later." Since everything has been recorded, the need to take the time to learn the language or stories becomes something that can wait until later. However, certain cultural practices are highly restricted from being documented through the tools of video recording, photography, and even writing. Some knowledge is only meant to be learned through oral traditions. This exacerbates the need for a true Hopi home.

Oral tradition is practiced among the Hopi and Tewa people but, as time passes and the influence of technology increases, the practice of oral traditions lessens. Language is a huge component to oral traditions. Today, the passing of knowledge and stories is delivered in the Hopi and English language. There is much trial in trying to fit Hopi words into modern day context and trying to find English words that can convey Hopi knowledge without losing important meaning. For example, the Hopi word for mom and dad extends beyond the English definition of mom and dad. By using the English version of mom and dad in the household creates a loss of important meaning to the parents and the essence of home. Leigh Kuwanwisiwma share:

> *We grew up calling our mom and dad iitangu and iitana. That's what is also a part of a home, it is this respect you show them because iitangu means "our*

mom", iitana means "our dad". So, you say it for all of the siblings when you call your mom and your dad by that traditional term. I wish we could get the kids to start saying that again. Because I think that's really what builds up this big environment of the home. That terminology that you grew up using. I don't think we ever really called them mom or dad, we called them Iitangu, but early on when you're a little boy or little girl you called them tata for dad and yuyu for mom. Those were kind of the baby terms and then you grow up, probably around 6-8, you start using the other terms. So, that to me, is one of the things I associate to a home. I remember that and that's how it should be. I never really think about it in this way, but now that you are asking me that's really what it's all about too.[238]

The Hopi language is very descriptive. Implementing the traditional structural elements and materials creates that visual gateway to bringing Hopi words back into the household. Once those terms are learned and visual aids are present, then the process of learning the stories and deeper meaning for that one word can begin. The materials that Hopi build with comes from the earth and that is the physical connection that they have with the earth. Language begins to create that 3D and 4D connection.

The language comes back to the home. It provokes the questions: What am I using to build this home structure? How many layers are there in the design of the roof? Where is this material coming from? What kind of mud am I using to plaster this house? It is not like you can easily go outside to make mud with the earth right outside the door. There are certain steps and certain materials that have to be used.

[238] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

Language and the visual representations provoke storytelling. For example, Bernita Duwahoyeoma shares this story about the *lestavi*:

> *Sure it's just a wooden beam but in order to get it, aboriginally, our men had to go on a long trek to the forested area, like Flagstaff, or even further this way to the east, to get those beams and they carry them home on their backs. This was done during that Spanish era, you know, when the Spanish church or the Catholic Church came in. And it reminds us of the hardship and the torture that our men were put through to get those beams. So, if we look at it with that historical focus and the pain it caused our ancestors, you put a deeper meaning to that beam of wood. Even though it's, modern, brought to us in a truck, it reminds of us of that history where our men went through that pain to bring those beams here. It wasn't just lestavi to us, in terms of a wooden beam today. It's easy to get today but, you know, it reminds us, brings back on that history of the original beams.*[239]

The language comes back to the environment. Again, Hopi is a very descriptive language. The interior and construction of the house is not the only connection that the Hopi people have with home. The environment and the land around them will forever be connected to the Hopi people. The language increases that connection by using words such as:

> *Sihtalöngva – "All the lands from where I am looking around, all the plants, all the flowers are blooming. So I got this nice carpet of flowers out there. The sunflowers, the bluebells…the buttercups, you got your white, and your red ones, whatever. All this life is coming up."*[240]

[239] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, October 2017.
[240] Sam Tenakhongva, interview by BriAnn Laban, Hopi Reservation, October 2017.

Saktalöngva – "All the land is nice and green. When you look out as far as the eyes can see, the earth is alive. It's nice and green."[241]

These words are not only associated with the Hopi Reservation but with the entire world, strengthening that connection to the earth. The above story and Hopi words are just a few examples of the potential language and storytelling that could be used when combined with architecture.

In oral traditional culture, language is important for without it the culture will seize to exist. In order for culture to truly be implemented into architecture, then language has to be a part of the design discussion. Architecture can help in the survival and revitalization of the language. There needs to be more of the traditional architecture intertwined with the modern architecture, because the traditional architecture is fading. Before we know it, we will no longer have any remembrance of our traditional architecture. Then the use of the Hopi architectural terms will no longer be needed. Once it isn't needed, the easier it is to forget. Once we forget, the fear of disappearing as a people becomes too real. The modern house hides the structure and hides the materials, the house is no longer visual. By incorporating the visual representations, this will help create an environment that can bring back the language, bring back the stories, and bring back the deeper knowledge that is missing in the modern house design.

[241] Sam Tenakhongva, interview by BriAnn Laban, Hopi Reservation, October 2017.

6.1.3 Socio-Culture Patterns – Qatsi – "The way of life"

Figure 107. Hopi Housing Guideline – Socio-Culture
Source: BriAnn Laban

The Hopi language continues to be heard within the household but not at every household. We are taught many stories, knowledge, and language and many of those teachings are given within the home. There is fear that oral traditions are no longer being practiced, resulting in the repetitive lectures on how it is important to remember the stories and language and to pass it on to the future generations. It is important to learn the stories and language but we have not created an environment that supports this. Instead, we have created an environment that discourages this with private rooms and technology. We have now come to view a home as a simple shelter, instead of a home that encourages cultural happenings. By incorporating socio-cultural spaces within the home this helps in sustaining historical and cultural values and knowledge.

The house has more use than just a shelter, or a place just to sleep. The house can serve as a connection to deeper knowledge. It sort of like the metaphor of an iceberg. The top of the iceberg are the practices that the people learn through oral traditions but underneath there is deeper knowledge that is learned when you live in the culture. This deeper knowledge becomes harder to obtain when traditional and modern living are split within the house. By incorporating the *mata,* the *tumtsokki,* the *pik'amkoysi,* the *tiiqatsi* room*,* and other cultural spaces into the design, this instills the importance of these practices and actually creates a space to practice it. There are many socio-cultural spaces that are missing in the modern Hopi house. Below is a list of some socio-cultural spaces that were mentioned among the interview participants. Each having a deeper meaning than the term expresses.

1. Kitchen – The kitchen is the heart of the home. It provides nutrients to the family and it is the most active place within a Hopi home. The need and want of a larger kitchen within the home is the number one design suggestion for a contemporary Hopi home. The reasoning is that everyone helps. All the women are in the kitchen helping in some way, either by cooking, cleaning, or prepping. That's how things get done, by working together. Not only does the kitchen need more space but it also needs to be connected to the dining area.
2. Dining Space – The dining space is the breath of the home. It is the space that exerts the most energy and the space where guest and family come together to share stories and knowledge. The dining space is more important than the living room space. When you come into a modern house the first threshold is the living room, but for a Hopi home the first passage way should be the dining space

because when someone comes to visit the first thing that is spoken is "Come in, sit down, eat." This is the welcoming sensation that is felt in many Hopi homes. They don't come in, sit on the couch, and watch T.V. They go and sit at the dining table because that is the space were conversation occurs without the distraction of the TV.

> *Always invite people in, your uncles, strangers, even if you just give them water. You need to let them know that this is their home, that you welcome them to come in. Once you start being mad about something, maybe not at them but when they come in, they're not going to feel right. So, you are supposed to have that openness. Like my mom did, she always had a cup of coffee, or something ready because there are people always walking around. You don't want people to start turning away. You want them to come visit you. That's when this house is most alive, with people in it. Once it's gone, you may have everything that you can wish for, but when people are gone it get lonely because of all the space.*[242]

3. Storage – "The small rooms were used for corn. They were stacked real nice, all on top of each other's in several layers. I don't know how they did it but it doesn't fall. Even if you took a corn from the middle part, it still stays nice."[243] Being a farmer is important in the Hopi and Tewa culture. Corn, squash, melons, and beans are some of the things that are planted. After harvesting, a lot of families have difficulties trying to find a storage space for their bounty because the modern house doesn't address this cultural need. "I guess that would be a

[242] Arlene Honanie, interview by BriAnn Laban, Hopi Reservation, November 2016.
[243] Gloria Navenma, interview by BriAnn Laban, Hopi Reservation, November 2016.

comparison from the traditional to modern because back then all the corn was stored in a little room, neatly. Today, you see them in garbage cans."[244] There needs to be a place to store and protect the traditional foods. Utilizing on nature that can help refrigerate and protect the food.

> *The other home environment is the corn harvested, the corn is family too. And they're considered our relative, they're family. The piki stone is always a female, the grinding stones are always female, so they're always considered family and they're part of the home too. The home is beyond just people occupying but it's these other parts of the culture that makes it complete. The home is always to be a female spirit. So we have pahos for them too. Even the ceiling has life of their own. That's why we have prayer feathers to put in there. The homes are in itself spiritual, they have a spirit too.*[245]

4. Rooms – The modern house design allows for us to skip some practices because over the course of time we eventually forget the meaning behind these cultural practices. We begin to perform some cultural practices with the mindset of "it's just what we do." There needs to be specific rooms that accommodate the cultural practices that are done in the home. These spaces should not create separation in the home as a whole, instead they should be designed to encourage the gathering of family and/or connection to the home. The home has to be open and welcoming to such activities, in order to encourage the youth and young adults to

[244] Gloria Navenma, interview by BriAnn Laban, Hopi Reservation, November 2016.
[245] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

continue cultural practices and knowledge. “I like the openness. See how we are always together but you have to think about when we have naming(s) and weddings. You’re going to always need a big center space.”[246]

a. Baby naming – *Tiiqatsi*, is still being practiced to this day. It is a cultural practice that strengthens the bond between the baby with the mother, the house, and *Tuwaqaatsi*. This ceremony shows that the spiritual and the physical body connections are built with the home at the very beginning: the umbilical cord represents the physical connection and the markings of the walls represent the spiritual connection. Being enclosed the whole time, simulating the mother’s womb, preparing them for their greeting to *Taawa*, the sun, and the world is a cultural phenomenon experienced between mother and baby for twenty days. However, the physical characteristic of a modern room isn’t a proper space for the mother and baby because this ceremony requires them to be enclosed in a space that reflects the womb. Today, the bedroom windows average between 5’-0” or 4’-0” wide and are often covered with blankets exemplifying how this modern room isn’t adequate for this ceremony. This space doesn’t need to be that large. It just needs to be big enough to have a bed and a small window for ventilation. This space has the potential for incorporating traditional materials because this is the introduction to this world for the baby.

[246] Belma Lomayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016

One of the things that really exist too is the behavior of the Hopi and Tewa people. For example, at birth, on the 20th day when they, the women, the aunts, say a prayer. They say the prayer and that is the intangible that is represented by the home. It is the spiritual connection because when they say that prayer the grandma, the paternal grandmother and paternal aunts lay out this life plan for the infant. You go on through life with happiness, free of illness, and that may you reach onto old age and peacefully go on. That's kind of the English version of that prayer but that's what's set out for all of us. As you grow older you should start thinking about it. What have I as a person done to fulfill that life plan? That kind of stuff is a reflection because they laid out a good path for you. So, that spiritual connection that happens during the birthing, the baby naming, it is a part of why we eventually never go away. I mean, we are always going to come back to home, to me that is the intangible.[247]

b. Cultural art spaces – There are plenty of individuals who continue to make pottery, carve, and weave. Unfortunately, there is no adequate space inside the modern house that could accommodate such activities and store the tools. large enough to share and not separate the occupant. The appropriate space for these sort of activities is equivalent to the living room, with

[247] Leigh Kuwanwisiwma, interview by BriAnn Laban, Hopi Reservation, November 2016.

plenty of natural lighting and seating. Additionally, this cultural space will create an opportunity for the youth to engage in those cultural activities.

> *I like how the houses are connected. I always thought of it kind of like a big room. It was always connected to another part of the house. So, it be like a big house here, add on another house here, and then eventually add on another house. Once that is established, adding on top. There would be a place for us to all be there. This one would be for the bedroom kind of stuff, the whole front side would be like the kitchen, living room area where people would come in, and this side would be a good area for making basket and everything cause this side would have seating and the outside would have seating all around.*

c. *Tumtsokki*, "*Piki* house" – Today the *piki* house is disconnected from the main house. There are stories that tell of how the *piki* house used to be connected to the main house because the *tu'ma* was an everyday cooking tool and not just a tool that was utilized on the weekends. Several participants have voiced the want of reconnecting the *piki* house back to the main house structure. The challenge is having to design it in a way that it isn't a fire hazard. The use of fire is needed to make *piki*. I've never heard of a story when the fire for the *piki* got of control, but it is important to design the home in a way that can control it if it does.

> *Old homes had piki stones inside the home. So, we did [my house] like that. My piki stone is right in there behind that door. I*

remember when my mom had her's, she had to go back and forth to her place and come into her tumsoki and come back when she was cooking something. But now I can be making breakfast, listening to the TV and making piki at the same time. I can hear everything going on in here. When I need to turn something on it's just right there. So, we kind of built our house like that.[248]

d. *Mata* "Grinding stone" – Corn meal is used for everything. Food, prayer, ceremony, and so much more. It takes a lot of hard work and time to grind corn but through this process there is a lot of meaning and prayer that goes into it. It's an experience that everyone needs to be involved in, so that they don't forget the importance and hard work that comes from it.

What's wrong with a housing project where even though you've modernized it somewhat for the family to live in. If they had the mata, the grinding stones, a little space for it within the home that would encourage that practice to continue. That's important because it represents a part of the young girls growing up and accepting responsibility…Without going through that [grinding ceremony] they can never ever experience it...you would actually bring back that practice by having those things available in these homes.[249]

[248] Arlene Honanie, interview by BriAnn Laban, Hopi Reservation, November 2016.
[249] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, October 2017.

e. Private room – This room only has privileged access. This room is only for the individuals who decided to take on the deeper responsibility of the Hopi and Tewa community.

> *Like upstairs I have that separate room where I really try to incorporate a lot of traditional stuff, whatever it is […] I want to try to keep that traditional concept, you know, asking is this how they did it long ago? It's still having that respect in everything that we do. So, if I were to get the idea of building a small little room for things, that's where I probably would start off first because that stuff is a lot older than we are and we know this. It will be around a lot longer than we are. Knowing that everything, no matter where it is, it's living and you want to treat it with that respect. Having that strong tradition in it is showing that respect and putting it in a place where it's kind of familiar with. So, we want to try to make them feel more at home. Sometimes when I keep stuff here, I feel that they are probably sad because they're not around what they're use to from long time ago. I always feel that way when I put something in the closet. I feel, 'iss okiwa, is it meant to be in here.' The only thing that kind of helps me to have that comfort is the paho that we place in there. But if I did have the resource to utilize the knowledge of how do you use materials in*

that way, I would definitely start with something like that. Compared to what we have now to support our homes.[250]

f. Bedrooms – More bedrooms aren't really needed, but they are desired. The idea of privacy has now become a custom that many Hopi and Tewa people embrace. However, that creates a disconnection from the family, from the home, and the land. The bedrooms need to be designed in a way that encourages the occupant to leave the room.

Verna Nahee: Hopi style homes where one big room. Everything was there. But now we're going the other way and we want to be modern, like in the city. Look at this house here, on the mesa it was one room. That's still one of the old ones and the only addition was the bathroom. And we all fit in that house.

Stetson Lomayestewa: But there's no privacy

Neomi Nahee: We weren't worried about that

Belma Lomayestewa: We didn't have phones and we had one TV, which was black and white. We watched it probably only on Saturdays. The other times we were outside doing something, we weren't inside. We weren't just in there playing games or watching movies, we were doing stuff all the time. And that's the difference, now you guys are in this modern day where you want your own privacy. You're all into your phone world and all into this computer stuff. To me, it's pulling you guys away from family.

[250] Devan Lomayeoma, interview by BriAnn Laban, Hopi Reservation, November 2016.

Neomi Nahee: We were on the mesa being in that one room house that we grew up in and it made us close as a family and as sisters. Being together like that close, it makes you closer as a family because I see how families are, like the younger generations, they aren't as close as we are. I think having that one room home brings us close.[251]

5. Outdoor Spaces

    a. Roof terraces – The roof terrace was once used to cook, dry the corn and peaches, to store food and water, a place to socialize, but with the sloped roofs this makes it impossible. There is a strong need to find a place to dry the corn and to store the corn where animals and insects cannot get to them during this process.

[You store] your watermelons and peaches and apples, but our apples we use to dig in the ground and just put your apples in there and it doesn't spoil. That was our own refrigerator. But the peaches we cracked them and dry them. And when you wanted some you would just boil them. Or you can take parch corn and fix it with your dry peaches, those were our foods. We would take a little sack of it in your dish cloth, or whatever. You had a cloth and you put your parch corn and your dried peaches in there and tie it and then take it with you when you went to school.[252]

[251] Verna Nahee, Stetson Lomayestewa, Neomi Nahee, and Belma Lomayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016.
[252] Gloria Navenma, interview by BriAnn Laban, Hopi Reservation, November 2016.

b. *Tuuwi* – The *tuuwi* is the stone seating located within and outside the home. The *tuuwi* inside and outside the home is bringing the community, the clan, and the spirits together.

> *I always liked the tuuwi, the extra seating along the walls. Outside and inside. For some reason, it's just a good idea for me because one thing, like I said the home is where everybody meets and you need people to sit somewhere. So, you need seating and on top of that, it creates the space too. So you're not having benches and chairs everywhere because it's already a part of the house. That's one of the features that I would like in there.*[253]

c. Bread oven – The Hopi and Tewa are always making bread. It's as simple as that.

d. *Pik'amkoysi*, "*Pik'ami* Pit" – *Pik'ami* is a traditional food that is still being made. It can't be made through modern cooking technology.

e. Firewood – The Hopi and Tewa needs a place for the firewood because they still use fire in their cooking and ceremony.

Bathrooms – "That's what I grew up under and we didn't have any bathrooms inside because they didn't think it was a good idea because you never had this unsacred thing going on in your home."[254] The main thing with this is that the bathrooms need to be located away from the kitchen and dining space, or for it to be in its own private space. In a sense having the bathroom disconnected from the home but still connected to the house.

[253] Hopi member, interview by BriAnn Laban, Hopi Reservation, November 2016.
[254] Evangeline Nuvayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016.

6.1.4 Materials

Figure 108. Hopi Housing Guideline – Materials
Source: BriAnn Laban

Earth is sacred to many tribal nations and respecting the land is a value that is held strongly in one's heart. Johnpaul Jones mentions, "In the Native worldview, everything is alive, endowed with spirit or energy. Nature has something to teach us, not only through obviously animate things like plants and animals but also through rocks, mountains, rivers, and places large and small."[255] Being able to work with earth creates a sense of connection, a sense of respect, and a creation of memories. For example, using *Tuuma,* white wash, to finish the interior walls is a material that has a significance beyond just the cleanliness of a white painted wall. One significant connection is the

[255] Johnpaul Jones, "Introduction: Remembering the Experience of Past Generations," in *The Land Has Memory: Indigenous Knowledge, Native Landscapes, and the National Museum of the American Indian*, ed. Duane Blue Spruce and Tanya Thrasher (Chapel Hill, NC: University of North Carolina, 2008).

interior walls are whitewashed to represent the women's womb. The whitewash serves as a reminder to Hopi people that our culture is a matrilineal society, and that the house always belongs to the woman for the very structure itself reflects the woman. The Hopi house is made from earth and this produces a strong memorable feature in Hopi architecture. Before the advancement of technology, architecture relied on the site to provide the building materials and the environment to determine the type of architecture design.

The fact that the Hopi people made a promise to take care of the land that was given to them, using the earth as the building material that creates a structure that cradles them is a symbol of how the balance is kept. The idea that the house takes care of us and we take care of the house reflects the Hopi duty of caring for the land and in return the land takes care of them. These subtle uses of earthen materials have shown and can continue to show a great impact in portraying cultural values and triggering memories back to the Hopi people if it is utilized appropriately in Hopi architecture.

Hopi Tutskwa Permaculture Institute (HTPI) already has a great understanding of using earthen, sustainable, and modern materials. The HTPI natural building program's model is recommended and implemented into the design guideline because the HTPI model is a living practice and example of gathering, building, and maintaining traditional Hopi building materials in a modern house design. HTPI also embraces the concept of working together and getting help from the community and other professionals. Receiving help from others is a strong principle within the HTPI natural building program and should be incorporated in all future projects on Hopi. The reason is that everyone will eventually learn the basics of working with earthen materials and the

minimum requirements in maintaining the house. One Hopi male adult shares his thoughts on the importance of helping each other.

> *I'm not a skilled builder, if I were to go get materials I would be scratching my head and be like 'dang, where do I start?' I would like help from all my sisters and all my brothers. I think that's, again, that's the difference from how we were growing up, is we are not afraid to ask for help when we need it. No matter how old you are you can never be too old enough to ask for help. I think that's just how Siyah and them brought us up, that we have our brothers and our sisters to lean on for help. Don't be afraid to go ask them, 'Can you help me with this, can you help me with that, can you give me information, can you show me how to do this.' Even if it's to ask to help me build my house, to come lend a hand, you know, come help me out. I would definitely ask all the brothers to help, even though they're not going to live in it. I would still ask for that help. I'd do the same thing too for them because it goes around that revolving circle, that we help each other.*[256]

Adopting and improving on the HTPI building model will aid in the rejuvenation of traditional Hopi architecture knowledge, aesthetic, and practice. Below are visual images of their process. More information and knowledge can be learned through the HTPI Natural Building Internship.

[256] Devan Lomayeoma, interview by BriAnn Laban, Hopi Reservation, November 2016.

Figure 109. Quarrying

Step one: Separate a manageable size of stone from a larger stone.
Step two: Start breaking pieces off. Roughly 12x6 or larger size stones from the manageable size stone.
Step three: Start shaping stone into a brick shape. Can also be done on site.
Step four: Gather and transport all usable stone to site.
Step five (optional): Shape and pile stones on site.

Source (all): *"Hopi Tutskwa Permaculture: Natural Building Internship Program"* Digital image. Hopi Tutskwa Permaculture Institute*, accessed October 22, 2017, https://www.facebook.com/pg/htpbuild/photos/?ref=page_internal.*

Figure 110. Gathering, transporting, and shifting sand

Step one: Gather proper sand material and transport to site.
Step two: Unload and place near site.
Step three: Screen grate sand.

Source (all): *"Hopi Tutskwa Permaculture: Natural Building Internship Program"* Digital image. Hopi Tutskwa Permaculture Institute*, accessed October 22, 2017, https://www.facebook.com/pg/htpbuild/photos/?ref=page_internal.*

Figure 111. Mixing earth and transporting wood beam

Cob, mud plaster, earthen floor mix
Step one: Mix materials for proper use

Wood beam
Step one: Gather wood beams and transport to site
Step one: Unload beams
Step one: Prep

Source (all): *"Hopi Tutskwa Permaculture: Natural Building Internship Program"* Digital image. Hopi Tutskwa Permaculture Institute*, accessed October 22, 2017, https://www.facebook.com/pg/htpbuild/photos/?ref=page_internal.*

Figure 112. Working and building with materials

Source (all): *"Hopi Tutskwa Permaculture: Natural Building Internship Program"* Digital image. Hopi Tutskwa Permaculture Institute, *accessed October 22, 2017, https://www.facebook.com/pg/htpbuild/photos/?ref=page_internal.*

6.1.5 Maintenance – Tunatya – “Tend to it” or “Watch over it”

Figure 113. Hopi Housing Guideline – Maintenance
Source: BriAnn Laban

Despite using proper construction techniques and utilizing best materials, the longevity of a home will always require maintenance. Over time, the materials begin to wear down and without regular maintenance will only lead to the increase in damages. Earthen materials such as mud plaster, adobe brick, and rammed earth have different levels of tolerance against the natural elements but it would be unfair to say that they are indestructible. Earthen materials have a high resistance to fire and wind but the most common damage is caused by water. Just like all other materials, water can cause harm and over time create unfixable damages. That is why a lot of thought has gone in to how to make earthen materials more resistant to water. Many attempts have been made in developing construction technique or other methods of protection to make earthen

material water proof, but it ultimately leads back to plastering, additives, and maintenance.

Cement is a product that is used a lot in housing. It can be found in the floor, walls, structure, and many other things. It can easily be added to earthen material mix to make it more stable and a little more water resistant. It is important to know how much cement to add to the mix. Too much cement makes it too difficult to work with and the time to work with it is lessened. Too little of cement prevents any potential benefits to be utilized. Added cement increases life of material by giving it a higher durability but the end product still needs protection from long term exposure to rain. Mud plaster or lime plaster can be used to spread over the earthen walls which adds an additional protection. It is important to monitor the plastered layer for it is susceptible to cracking. A crack can provide an access point for water to seep in and reach the structure core. If the cracking isn't addressed then critical issues will occur over time. Therefore, it is important to reapply a protective layer periodically.

Figure 114. Natural stone wall compared to cement plastered stone wall.
Source: BriAnn Laban

The natural look of a sandstone wall has a beauty on its own and an extra layer of mud plaster takes away that natural aesthetic. An alternative to protect and maintain the natural look of a sandstone wall is to protect it with a large overhang. This may seem unnecessary, especially in hot dry climate that has little rain, but having this extra

protection can also extend the walls longevity and decrease the cost of time and financing of having to reapply a protective plaster. Overall, time and effort is needed to maintain an earthen home for it will increase the longevity and decrease damages.

Yes, part of maintenance is applying the information provided above; however, the Hopi perspective of maintenance is slightly different. Their view is the same as in if the earthen wall is maintained then the longevity of the home will be increased and critical damages will become less or none existent. However, the Hopi philosophy of maintenance can be explained through these two stories provided by Bernita Duwahoyeoma and Sam Tenakhongva.

Bernita Duwahoyeoma:

> *When you whitewash or you plaster, that is something that's done all the time just to renew the home. I guess not only is it just for renewal and maintaining the house but it would symbolize the importance of respecting the home too. You just don't let it crumble. You have that respect for the materials that sustain your home. You give them a purpose. That in its self is teaching for your children and the family the importance of the home and it's done frequently. Like I remember my grandmother used to do it every time. She had to plaster the wall with the red mud and then she always covered it with the white one, it's just the whitewash…It's just a way to show renewal…it's a way of saying thank you to the mother, for providing us with all these things. The stone, the sand, the water, the materials that we have to sustain everything…a way of our life or that helps us to continue to have those things available to us.*[257]

[257] Bernita Duwahoyeoma, interview by BriAnn Laban, Hopi Reservation, October 2017.

Sam Tenakhongva:

> *So in our homes, in summer time, before home dance, as a whole village, everybody is supposed to go and plaster their homes. But, you don't just plaster it with the brown, what you're supposed to do is make it white. Nice and white. When you do that you are inviting the rains to come in and wash it off for you. It's not just to keep the house and maintain the walls…You're inviting the rain to come in and wash it off to continue life*.[258]

It is said that the house is a living being. What the Hopi and Tewa people are trying to do is bring life to the home. Therefore, it needs to be taken care of just like any living being. This Hopi idea of "taking care of" is still practiced in the villages. If this Hopi value were to be brought down to the modern houses below the mesas then this would reinforce the connection they have with their culture and to the earth. Of course, part of that maintenance extends beyond the plastering of the home or maintaining the roof. The Hopi and Tewa people's duty is to care for this land. Meaning they need to maintain and clean the spaces outside, such as the bread oven, *pika'mi* pit, caring for the fields and garden, and the land around them. There are certain times when certain things must happen, but overall, by requiring these types of spaces and materials as part of the design will reinforce the value and knowledge back into the Hopi and Tewa people.

[258] Sam Tenakhongva, interview by BriAnn Laban, Hopi Reservation, October 2017.

6.1.6 Seven Generation – Qatsi ninqa – "That life that is to come"

Figure 115. Hopi Housing Guideline – 7 Generations
Source: BriAnn Laban

> By and large, Westernization undermined and undercut the seven generations model. The linkages that bonded the generations were disrupted though Euro-Western practices intended to forcibly remove Indigenous communities from their territories, culture, and children. – Ted Jojola[259]

The seven generation model was a method that Hopi and other Pueblo tribes use as their design framework. It is proven by the continuous occupied structures and the different structural styles that are seen throughout the villages. Arlene Honanie provides

[259] Ted Jojola, "Indigneous Planning: Towards a Seven Generations Model," in *Reclaiming Indigenous Planning*, ed. Ryan Walker, Ted Jojola, and David Natcher (Montreal; Kingston: McGill-Queen's University Press, 2013).

an example of the seven generation model within her own home when it was being built. Her children were already all grown up and out of the house but she made sure to include a space for them when they returned.

> *It was really just us at that time. People were asking why are you building such a big house because it's just the two of you. But we anticipated our children coming home because that's what family is. Western concept is once they're 18 they're out the door, they're on their own. But Hopi doesn't think that way. It continues and you want your family to keep coming back. So, we have how many bedrooms and there was only two of us at that time because those guys were out doing their own thing. But eventually they started coming back…With that in mind, we still want to continue with our culture, with our teachings, and that we believe in that family is number one. You're building it for the family, you're not building it for just two, it's for everybody*.[260]

For Hopi, the definition for seven generations also involves looking forward to that life that is yet to come. It is talking about those who aren't even born yet. We don't know when or how they will come. We don't know if it will be a boy or girl, but we are looking forward to that future. Everything that is done now is to benefit them in the future. If the Hopi and Tewa people do not re-embrace this ideology then the Hopi home will never be a home for the future.

Future: Structural Room to Grow

The beauty is in the details. The traditional Hopi architecture was designed for the purpose of growing. The growth of a building was not from side to side but the growth of

[260] Arlene Honanie, interview by BriAnn Laban, Hopi Reservation, November 2016.

the house was made upward by building on top of one another if they needed more space to grow. The traditional materials used in the past were from the earth and trying to build a house entirely out of earthen materials today would create limitations. We do not want to create limitations because there are sustainable materials and technology used today that can help improve the longevity and energy usage of a house. Therefore, building with both types of materials can establish balance between both worlds. The aim for most Indigenous architecture is to have something harmoniously co-exist within daily activities. But how do we prepare for a life that hasn't come yet? Again, the beauty is in the details. If the house is designed to be able to add new rooms and the ability to change then this shows an effort towards considering the future generations to also enjoy the home in their own time and modern commodities. Devan Lomayeoma provides he's acknowledgment towards those who constructed their own home because he saw how easy it would be to repair or expand the house if you knew how the house was built.

> *I think I would honestly build my own house. I'd get the materials to build it, that way it comes out the way I want it to. I'd be happy with how it looks. Or if I want to change something I can. I talked to some guys that do build their own home for their families. I got the information, if something does break, how do you change it. They have their own little tricks. Like the window, I asked this one guys, if you build your whole house out of cinder block and the window breaks, how do you change it? He showed me that on the window frame he put 2x4's and the windows are just screwed into it. So, if the window breaks you just unscrew it and you take that window out and put a new one in and screw it back in. I was surprised because I thought you had to take down the whole cinderblock part of it and then*

change it. It's pretty interesting seeing those little tricks of how they put the houses together. The one guy I was talking to I asked if he thought far ahead to where if you wanted to extend out this way would it be easy for you? He said, 'Yeah, that's the reason why this section is build this specific way, in case I do want to add on to that part. I know where to cut and I know where to add it on too.' Versus this house that was built by the HUD home. When these additions were added they had to figure out how to put it on. These beams aren't really too supportive. I think, initially, when this house was first built it wasn't built to add any additions to it. I don't think they kept that in mind and thinking that the family wouldn't add a staircase. Now that's the problem we're dealing with with this house. So, if you did build your house by yourself you'd feel more comfortable doing a facelift to it. Again, it instills that pride on you saying you're living in my own house. I don't have to be paying the HUD home every year.[261]

Present: Clan System

The entire line of generations of that clan come into that home when it's erected and that provides for the deeper meaning of home. It doesn't just belong to one family. It belongs to everybody that comes from that present generation that's in that home. – Bernita Duwahoyeoma

Part of the Hopi seven generations model is that the home is passed down to a girl child of the family. This instills the concept that the home is supposed to last beyond one homeowner's life span, or that the home should not be abandoned and purchased by someone else. The women of the clan are the only ones who can own a house. So, it is

[261] Devan Lomayeoma, interview by BriAnn Laban, Hopi Reservation, November 2016.

important to have girl children so that the home will have someone who can take care of it when the older generation can no longer do so. Of course, architecture can't control who has children and for the child to be a girl, that is simply impossible. But what architecture can do is to remember that the home that is being designed and eventually built isn't just for the current mother and her family but for all future mothers and their family.

This custom of handing down the house to the girl is still practiced today. However, more children are being born and the mindset is that the house can only be owned by one girl. Therefore, many clan sisters ask their uncles for a land assignment so they can build their own house. Joel Nicholas, a Hopi male adult, describes how this practice is not only separating the family physically, but how it is also causing issues within the families.

> *Generations go on and the kids becoming more independent and they want to have that place of their own, that they can call their home. However, it is also separating them from being a part of a family. They want to become individualize and that's kind of like how Walpi housing and HUD houses are being built. Everybody wants to be out there. They don't want to be close together like how the homes in the villages are right next to each other. Just having that big change is what is causing all these problems for the families. By not communicating and being as one, everybody just wants to be mad at each other and stuff.*[262]

If this blind practice of wanting your own house continues then the land that is meant for

[262] Joel Nicholas, interview by BriAnn Laban, Hopi Reservation, November 2016.

farming will no longer exist, instead it will be filled with houses that are spread far apart, electric lines zig-zagging across the sky, and infrastructure stretched in all different directions. Therefore, the design strategy is to adopt aspects from the traditional planning system to help eliminate the current issues that are seen with today's housing and to encourage the Hopi value of a close-knit family.

The clan system iterates the strong family value that is within the Hopi and Tewa people. This family value can truly be iterated by the similar story that was shared by several individuals about eating from a common bowl. The following quotes are from two Hopi elders and a Hopi male adult, who share this collective understanding of family togetherness.

Evangeline Nuvayestewa:

> *To me, a home is nurturing for our youth first, and then we think about everybody else, our uncles, our grandmas, our bah-bahs, and we all lived together. That's the way it should be and we are all in the same area and that brings closeness. Like when we all eat together, we ate from the same bowl. We never had individual bowls, it just been recently that the dominate society brought. In fact, we weren't fearful about germs and all that stuff because we hardly had any illnesses before the Europeans came.*[263]

Gloria Navenma:

> *In the same household we weren't separated from each other because long time ago we all ate out of the same dish. No spoons. Everybody dipped their hands and bread, like the tortillas, that you make. Nobody ever argued because we were*

[263] Evangeline Nuvayestewa, interview by BriAnn Laban, Hopi Reservation, November 2016.

close like that. Nowadays, if you are going to eat something else you get another spoon, a clean spoon. Now, if I bite from this, I don't think anybody else will eat it, the younger ones especially. If they see a left-over they don't think it's good to eat… They'll say eww, you know, thinking that maybe I had some kind of germ, but that's the reason why they wouldn't eat it. Back then, nobody ever thought about germs or being sick. Sick from eating from that same bowl.[264]

Joel Nicholas:

The other part is, the thing that we are losing is, the old way of eating, we all shared from one bowl. That's why we don't know each other's anymore. We don't dip our hands anymore in that one bowl. That's kind of what I did when my daughter went through her grinding ceremony. I told my mom that's what I wanted to do for her, my daughter. We sat on the floor and we just had that one bowl in the middle and that's how my daughter served us. It brought everybody together too and we were there all talking to each other. It felt good just seeing that and being a part of it.[265]

In order to embrace the clan system beyond the general understanding of who you are related to, the potential homeowners are the one who will need to break away from outside ideals in order for these planning strategies to work and to embrace the family oriented value displayed in the clan system. This may prove difficult, but with proper planning this "burden" may not be so bad. First, the potential homeowner should continue to ask the uncles for land, but only to use it for their fields. This limits the

[264] Gloria Navenma, interview by BriAnn Laban, Hopi Reservation, November 2016.
[265] Joel Nicholas, interview by BriAnn Laban, Hopi Reservation, November 2016.

accidental encroachment on different clan's land. Second, adopting the mindset of staying close to the mother's already existing house. This idea may be a bit tricky because of the adopted idea of moving away from the parents. However, with this planning strategy, the one-wall concept can be brought back to modern Hopi housing. If this idea cannot be fully embraced then the new house can still be detached but within a quick walking distance. This will encourage more visitation among family. Third, utilizing the outdoor socio-cultural spaces to encourage clan relatives to interact with one another. Fourth, culturally unrelated, be aware of the existing infrastructure so that new houses won't be erected over major plumbing systems. Fifth, understanding that future generations will build their own houses in the area, therefore doing intensive planning on where new infrastructure will lie in the area. What is being planned is not to discourage the construction of new houses, instead the planning strategy is to provide a less invasive planning system that won't result in scattered-homes. Of course, the number one value is to have the girl child inherit the house and to have her family expand the house for their needs, but when that isn't an option, the main goal is to have any new house in proximity with the other clan relative's houses, in order to encourage the Hopi value that family is supposed to be close.

Past: Past Phenomenon

That's the connection back to earth. We don't use lead paint. You know were not supposed to lick [the walls] but we are using natural materials so it doesn't harm our kids. They're taking part of that house and putting it into them. That's another part of it.

– Sam Tenakhongva

With the continuous impact of western culture, it has become difficult for generations to connect within the home. The older generations express their concern of this disconnection. They want their children and grandchildren to live with them but many of the young adults want to be independent. There is encouragement of leaving the Reservation to pursue higher education but there is also high encouragement to return home. When young adults finally get a taste of independence they do not want to give that up. This results in them not returning home. If the younger generations do end up staying on the Reservation, they do not have a choice of moving out of the house because there are no independent housing options, like in the cities, on the Reservation. This causes stress and conflict within the house. I believe it is due to the cultural knowledge gap between generations. A young Hopi adult woman shares her perspective:

> *It is who we are as a people. Your parents they want to keep you close. Your grandparents they want to keep you close…So, they try to provide a home that's big enough for all of them. I think that it does more bad then good when we are living together. You have a lot of stress, and you continuously see each other but… it's nice though when we are doing stuff. Like holiday times we are all already together. You don't have to worry about traveling or anything and that's a plus…Our generation is pretty westernized and we have the media. So, it kind of influences the way that we think and what we think is a social norm. Versus back then they had their own definition of what social norm was. That was just it. Everybody lived together and everybody was together as a family. When I think of now, we have our own drive, our own perspective, our own different ways of thinking and I think that creates a lot of conflict in the home because we are not*

all on the same level. We may hold the same cultural values but the different generations ways of thinking cause a disconnection.[266]

The elders share so many stories of how it use to be back in the days before the influence and distraction of technology. They express how they wish they could share those experiences with their grandchildren. Yet, with how the houses are designed, how the land is treated today, and the distraction and influence of social media, it is hard to find moments to share those experiences. The idea is to incorporate some of the elder's memories into the home so that it can stimulate similar experiences that the elders cherish to this day. This helps create a bond between all generations and to revive the Hopi values within them all. Also, by experiencing these different phenomena throughout the landscape and the home this then helps creates a stronger sense of place for the younger generations because the ones who still feel the strongest connection to home are the elders.

Some elements that can be incorporated into the design include:

1. Using sandstone and having it close to a water source so it can produce that sensation of wet earth, which causes you to want to lick the walls.
2. Allowing the house to flow counter-clockwise.
3. Creating a space were the Hopi and Tewa language is the only spoken language.
4. Having a private room that the children aren't allowed in. This teaches the value of respect and appreciating the mystery and curiosity that is created.

[266] Kristy Pavatea, interview by BriAnn Laban, Hopi Reservation, November 2016.

5. Using earthen material that gets cool in the summer where you can't help but want to hug the wall and absorb its coldness.
6. Having a fireplace that not only warms the home but the person's soul. They appreciate the fire a lot more because they know the hard work that has gone into building a fire.
7. Creating a place, such as using the *tuuwi* and strict planning, that would bring the family and community together on a cool evening where they share stories and watch the kids play before it gets dark.

6.2 Hopi Housing Guideline Diagram

Figure 116. Hopi Housing Guideline based on the information provided to me from the Hopi and Tewa people

CHAPTER 7. CONCLUSION

7.1 Conclusion

My journey to discovering my passion for architecture and completing this dissertation on a Hopi Home has been an incredibly long and challenging process, which was born out of a discussion during my undergraduate years at Dartmouth College. My fellow Native American peers were sharing their stories of home. They all showed a deep love and connection to their respective communities. I was exponentially inspired when they began discussing their career goals and how those goals tied into their ambition to return home and help their communities. I was envious of their passion, because as much as I wanted to be where they were I was nowhere near as solid in my own ambitions and path. The only thing I knew was that I wanted to help my community, but I didn't know how exactly I would contribute. At the time, I was majoring in studio arts with a focus in photography and, surprisingly, the idea of architecture wasn't far from my areas of expertise.

One evening while I worked on my photography homework, a group of my friends were enjoying each other's company while beading and sewing. Their stories were jumping from topic to topic and yet each story would lead them back home. Eventually they had a common theme of sharing their future plans. Each voice was awe-inspiring but what intrigued me the most from their stories was their collective frustration over how difficult it would be to return home - because they didn't know where they would live. One option they had was to move back into their parents' house, but since they had discovered their independence from their parents in college, the thought of moving back in with them was unthinkable. They wanted their own place, even if it was an apartment; however, they all shared frustration over the limited housing options available on most Reservations. This was true for the Hopi Reservation as well. As I reflected on

their comments about returning home I knew I, took would have to move back into my mother's house if I were to find a job on the Hopi Reservation.

In 2012, at Dartmouth the housing shortage epidemic was revealed to me in plain sight. When I moved to Barrow, Alaska, I learned that the housing on Indigenous lands were not designed for our respective environments and cultures. I was fortunate enough to learn some of the Inupiaq culture during my stay in Barrow and through the little information and experience I acquired, I began to realize that the cultural representation in the housing is extremely lacking. It was then that I reflected on the housing on the Hopi Reservation and saw the similar issue. Even though the houses up in the villages reflected cultural knowledge and awareness, that reflection was not evident in the modern houses across the Hopi Reservation. My realizations in Alaska, paired with the moment shared with my Dartmouth colleagues, together inspired my new-found revelation about the importance of architecture. Then, I decided to go to architecture school.

The next step was to decide on which school I wanted to attend. My experience in the classroom at Dartmouth was a little discouraging when it came to my cultural perspective. Many times, I had to fight for my voice to be heard and, at that time, my voice wasn't loud and proud. Fortunately, I had a number of Native peers who would support me and help me persevere, but I didn't want my architecture experience to be similar. I didn't want to fight the majority on the importance of an Indigenous perspective, my perspective is just as valid as the mainstream. Therefore, I was in search of a program that encouraged cultural knowledge.

I almost settled for applying to programs that didn't emphasize culture, because I couldn't find any. With a quick suggestion to research schools in Hawaii, I stumbled upon the School of Architecture at the University of Hawaii at Manoa (UHM). I knew I had to attend UHM because I felt that indescribable feeling that ran through my soul when I discovered that

their school emphasizes on the Hawaiian culture. Granted the main cultural focus was on Hawaiian culture, but it was still *culture*. However, with each passing semester I came to realize that no one really knew how to incorporate culture into the design process. The professors would be there to encourage the students to remember to incorporate Hawaiian culture into our designs, but there wasn't much guidance or process on *how* to do so. Of course, the Hawaiian students had an advantage because they come from the Hawaiian culture, but during critic there was still a lack of representation in the design. I surely realized that my future work(s) would target the learning and process development for how to implement culture into the design process.

Part of the curriculum at the School of Architecture required that the students must complete a practicum. The school provided a list of firms that supported the school's curriculum; however, they were firms that were not focused on the importance of culture. One of the purpose of the practicum experience is to gain experience, knowledge, and resources for your future dissertation research. Again, I was in search of a place that encouraged cultural integration, plus it had to be the dominant learning tool for my academic experience.

I was extremely fortunate to identify an Indigenous architect who would support my future academic endeavors, who encouraged and fought for Indigenous perspective in architecture, and she was located in Arizona. The fact that I would be close to home was lucky, but the fact that I would be studying under the guidance of one of the first Indigenous female architects who is trailblazing for Indigenous Architecture was a one in a million opportunity.

During my time under the guidance of Wanda Dalla Costa, I was given the opportunity to work with the Gila River Reservation. This was my first opportunity in architecture to work with tribal housing. It was an interesting experience and a huge learning curve, because they valued their cultural perspective and they wanted it intertwined into their house design. However, like

most individuals who seek architects to design their house, they too didn't know how to integrate culture into the design. Therefore, we requested to have a design charrette. This is when I first learned of the stereotypical cultural design elements that I have read in the few resources about Indigenous Architecture. Our timeframe allowed us to develop a few schematic designs, which led to our final design that we presented to the community during their annual Mul-Chu-Tha Fair & Rodeo. The design was heavily influenced by the design charrette and the research gathered about their culture and traditional architecture. The design received valuable feedback from the community during the fair and it provided an insight on how the design process with Indigenous communities is typically handled. The process to incorporate culture into the design was still underdeveloped, but at least there was the effort to try. Our team was the outsider looking in and I knew there was still more cultural knowledge and importance that could have been implemented but we didn't have a guideline on how to go beyond the current process. This helped influence my dissertation to be on creating a guideline that will aid Indigenous architects and non-indigenous architects in implementing culture into the design process.

Culture is a very broad term that needs to be paid particular attention. Therefore, before I could continue my research endeavors, I had to decide which tribe I was going to focus on. It would seem like an easy choice to make because I come from an Indigenous tribe; therefore, I should focus on my own tribe. However, what made this decision difficult was the two separate and opposing pieces of advice that I have received throughout my life. The first advice I was given was to go out and help a different tribal community. The reason to help a tribe other than my own was because they would be more open to receiving help from another Indigenous perspective outside of their own community. Also, this would allow me to gain experience that, most of the time, is a silent requirement from your community before you come home. Without

it, they will continue to see you as the child that they watched grow up and not take you seriously as a professional. The other advice I was given is to help my own community first because I come from their same perspective and understand the issues a lot more than an outsider would, which would provide me the strength and motivation to fight for something better. However, one potential obstacle with that is being seen as an individual who has all the answers and who is capable of fixing everything.

I was torn between which path to take because I have felt that backlash of coming home and wanting to help but being looked down upon as the niece/granddaughter/cousin who still didn't know anything. A part of me didn't want to go through that again but the other part that was screaming at me was the fact that my dissertation work is about *culture* and, before I could help others, I would first need to understand my own culture. My knowledge of my own culture was limited to simple cultural responsibilities and behaviors but the deeper meanings with culture, especially in respect to architecture, I had no knowledge of. I felt shame with this acknowledgement because I felt like a bad Hopi-Tewa woman who didn't know my own culture. However, I had to remember that I am never too old to learn. Therefore, I decided to focus on the Hopi culture to push forward my dissertation work.

Never did I imagine that the first half of my journey, stated above, was going to be the easy part. I honestly thought that the journey forward from deciding my thesis topic would be the easy part because I have completed numerous research projects before and I have written thousands of words, so I thought I had enough practice to get me through this process. However, I was in constant battle with my methodology and I had another choice to make. Either choose Western methodology and follow the order of known research methods and develop work that only the world of academics would understand. Or choose Indigenous methodology and venture

down an unknown path of research method, develop it for my specific needs, decolonize a few minds along the way, and fight for the importance of the Indigenous voice in academic work. Surprisingly, the choice wasn't really up to me. In order to get my dissertation to the level I wanted, Indigenous methodology was the only path available to take.

I've heard and studied Indigenous methodology before, but never did I imagine it would be the main framework for this dissertation. For example, I did find a resource that discussed Hopi architecture and culture simultaneously. It was written by Rameen Ahmed who was a student studying architecture at the University of Arizona. She wrote her thesis in 1993 about the Hopi traditional and modern housing. Her thesis is titled, *Housing from a Cultural Perspective: The Hopi Way of Dwelling*. Her argument was that in order to create a balance environment of cultural continuance and modern living there needs to be a modern house that incorporates social patterns seen during ceremonies within spatial use.[267] I experienced great fear and extreme excitement at the same time because I thought I found a resource that produced the work that I wanted to do. I froze because I thought I would have to start all over and create a new original idea. I was excited because I found work that could possibly provide guidance. As I continued reading I was agreeing with the information she was providing. The difference between our source of information is that it is my reality. I grew up and still living with the consequences that were developed through HUD houses. This is a common and unfortunate experience all across Indian Country, and it is completely unacceptable that we are still being colonized by our own homes.

[267] Rameen Ahmed, *Housing From a Cultural Perspective: The Hopi Way of Dwelling* (Arizona: University of Arizona), 152-153.

In Ahmed's work, she provides several recommendations on how to address HUD's restrictions on Hopi housing. Her first suggestion is for individuals who are financially established and that is that they should build their own houses that incorporate spatial patterns that reflect Hopi culture.[268] This is a great suggestion but the only issue with this is that many individuals who have built their own houses do not know how to design with these cultural intents, especially since a lot of their design inspirations comes from Western style architecture. The other suggestion she made is to develop a new direction for HTHA by consciously designing houses that reflect Hopi culture. She also mentioned that if this was an impossible act due to political and bureaucratic laws that prevented change, then the action to take is to relinquish partnership with HTHA and develop a new Hopi housing authority.[269] The final option that Ahmed suggested is to create an alternative housing program. Surprisingly, the following year after Ahmed completed her thesis, an alternative housing group called Red Feather was established, but it would be several years later until Red Feather would make their way to the Hopi Reservation. Then in 2015, another housing organization emerged called Hopi Tutskwa Permaculture Institute: Sustainable Homeownership Program. The HTPI Sustainable Homeowner program is still establishing themselves but having two housing programs besides HTHA is a step forward in providing housing alternatives. These programs have embraced sustainable design but the cultural implementation is still lacking.

Ahmed was also able to provide a guideline list that includes the following: Settlement patterns allowing options for gathering, creating cluster for the immediate matrilineage members, upper story terraces as outdoor social centers, one larger undivided space for most activities,

[268] Ahmed, 153.
[269] Ibid., 153.

cooking as part of the major activity within the household, doors to modulate interior temperature, non-visual and non-aesthetic use of windows, uniquely identifiable exterior within the uniformity of the neighborhood, and finally the combination of traditional materials with modern technology for construction.[270]

In the beginning of my interview process that followed the qualitative interview process, these were the similar outcomes I received from community members. These are not negative outcomes but there is still a lack of cultural emphasis in these design suggestions. Also, half of her list today has either become a stereotype in Indigenous architecture or is currently at work to be implemented. Unfortunately, besides agreeing with the issue, Ahmed was unable to provide much guidance of how to develop a guideline that implements culture into the design process. Her methods were influenced by Western methodology and, as I mentioned in the Methodology chapter, it was not a guiding factor throughout my research. In fact, it was an obstacle that prevented any advancement in my work.

Twenty-five years have passed since Ahmed's thesis and the modern housing is still severely lacking cultural representation and the knowledge towards traditional Hopi housing is in decline. Despite Ahmed's attempt to acknowledge this idea 25 years ago, HTHA has not changed when it comes to cultural emphasis. Twenty-five years may not seem like a long time but considering HTHA's 50+ years with multiple complaints and concerns to incorporate more of the cultural needs into the house design is still apparent. HTHA does have building restrictions that prevent them from straying from the path of Western architecture. Fortunately, two organizations have emerged and aren't trapped in the Western model of architecture or

[270] Ibid., 155-173.

government policies. As long as they decide not to receive federal funding through HTHA, they are able to design and build with freedom. However, having all that freedom can be overwhelming, which may be the reason why the two organizations have opted to follow and adapt some of the International Building codes or other similar non-Hopi building and designing standards to their process. There is no shame in following and adapting standards from another organization, in fact it is strategic so that you don't have to reinvent the wheel. Still, having that freedom to truly try to design a culturally appropriate house should be exciting. The Indigenous architecture path has been ventured into, but the outcome has not yet been fully realized.

The type of architecture that is imposed on Indian Country is Western type architecture that disconnects families and creates disconnection from the environment. In order to reconnect ourselves as Indigenous people and communal societies, it is important to understand the cultural perspective of the past and present. This not only teaches you about who you are but it helps with acquiring a unique perspective, strengthens culture knowledge, gives you voice, and provides you that understanding of sacredness. Understanding the past helps to advance and guide the present because, if the past is forgotten, then there is no way to manage the present. Likewise, if the present isn't confronted, then there isn't a solid foundation to support the future.

If Indigenous architecture is to be a part of the Hopi peoples' well-being and socio-cultural structure, then Indigenous architecture must speak not only of the modern reality of housing with favorable commodities, but it must also speak of the past cultural phenomena with land and traditional architecture. Clara Sue Kidwell and et al. wrote, "It must bring the process of imagining a new and healthy future that can provide Indian people with a sense of hope."[271] We

[271] Clara Sue Kidwell, Homer Noley, and George E. Tinker, *A Native American Theology* (Maryknoll, NY: Orbis Books, 2001), 5.

are at the point where we need to amalgamate both perspective so both Indigenous and non-Indigenous audiences can understand the importance of incorporating culture into the house design for Hopi housing. We must set high standards now in order to achieve that future.

In the past, the Hopi Tribe had many accounts when an outside researcher came into the community with the assumption that the Hopi people will share their sacred knowledge willingly. In the past, the Hopi Tribe were forced by the outside researchers to teach them Hopi culture. In the past, the Hopi Tribe tried to trust outside researchers with their knowledge with the consensus that the knowledge given would produce solutions that will help the Hopi people. In the past, the Hopi Tribe has settled for the type of housing that has been given to them. In the past, the Hopi Tribe followed the style of Western architecture. In the past, the Hopi Tribe favored the Western lifestyle. In the past, the Hopi Tribe was losing connection to their culture. In the past, the Hopi Tribe was disconnected through the generations. In the past, the Hopi Tribe were only connected to their culture up in the villages.

Today, only the first three sentences above are true. The Hopi Tribe no longer settles for the mistreatment from outside researchers coming onto the Hopi Reservation and seeking information that would make them valid in their field of expertise. The Hopi Tribe developed the Hopi Cultural Preservation Office (HCPO) to help protect the Hopi-Tewa people from mistreatment and to protect the Hopi knowledge that has been with them for centuries. By implementing HCPO and enforcing their rules for future researchers they began to lessen the negative effects that often comes with research on the Hopi Reservation. By creating a higher standard for researchers, they provide a safer environment for the people and the researcher.

Now imagine setting even higher standards for our people in terms of architecture. Imagine all those statements above becoming true in regards to our homes. Imagine realizing,

manifesting, and implementing true decolonized modern day homes for all members of the Hopi Tribe. Imagine the vast cultural, spiritual, social, education, and health improvements in the lives those who will dwell in those modern Hopi style houses, houses that reflect and embrace the authentic and traditional Hopi way of living.

This dissertation research and Indigenous methodology designed to incorporate culture into design is a solid stepping stone in the path to creating that reality. This dissertation calls for setting higher expectations and responsibilities on architects who wish to work on Indigenous lands, articulating that in order to truly serve the tribe and its people, the architect must implement culture beyond the 2D representation. Imagine the lifestyle changes we would witness across Indian Country if culture is truly implemented into the design process uniquely for each of the 565+ federally recognized Tribes on their own respective homelands, homes that use traditional materials and intentional 3D and 4D semiotics, specific to climate and culture. Imagine an era where Indian Country no longer settles for housing that continues to colonize the Indigenous mind, body, heart, and spirit.

I offer this dissertation to you, to the realm of academia, to the field of architecture, to Indian Country as a whole, and to the future generations as a living document that will grow with each breath of life as offered to it by those who choose to take on this endeavor. Those who take this work a step further will inherently be guided by the people in our Indigenous communities who contribute their stories and knowledge, for the betterment of our homes and hearts that beat within them. The Hopi Home is a model for those who come after, guided by all of our relations and ancestors.

APPENDIX

Potential Area of Study

We are all given a path to take. Many times we see our path as unfair or not the right one. I know I have felt that sensation because I am evidence of an individual who has sacrificed traditional knowledge for Western knowledge. At this point I wasn't sure where I belonged. I have become so frustrated and hurt that I wanted to quit. I was caught in a pendulum of emotions trying to decide if quitting school and returning home to strengthen my traditional knowledge was the best route, or to quit home so I can push harder to become an academic scholar. I was torn because I knew the importance of both. "Go out and learn all you can and come back and show us what you have learned," echoes in my mind constantly. This is the path that some individuals, like myself, are encouraged to take. It is important that no one is alone in this journey. We have all gone through this turmoil and in search of how to help in some way. Below are brief descriptions of potential areas of studies or potential obstacles that one might face. I hope my perspective and experience helps the next student in their research journey.

1) I have come to realize throughout my academic career is that Indigenous methodology isn't a one person's ordeal. We have our professors who know the Western methodology better than anyone but Indigenous methodology is still a growing field of research method and within that framework we hear and discuss the supporting elements; such as the importance of oral tradition, situating self, knowledge brokers, parallel meanings, language, phenomenological experiences, and so much more, that all contribute to the definition of Indigenous

methodology. I discussed a few of these methods but I know it can be pushed further. There is always room for potential study within the methodology framework itself.

2) One of the major factors about Indigenous methodology is that the researcher is Indigenous themselves. Of course, a non-Indigenous researcher may use and should use Indigenous methodology to help with their Indigenous research topic for it can help them create a deeper connection with the community and their research. Linda Tuhiwai-Smith categorize the two by insider and outsider. She mentions that the insider has to perform just like an outsider by having "ways of thinking critically about their processes, their relationship, and the quality and richness of their data and analysis." However, there isn't much dialogue on how an outsider should behave while implementing Indigenous methodology in their research.
3) Self-locating is a method that still needs to be develop because I had to self-locate myself with each interview and sometimes I would forget to do so. Sometimes it would cause issues and other times it wouldn't. This time, forgetting to self-locate wasn't damaging to my research because I was able to revisit some of the participants and further discuss my research project with them in a less formal setting. At that time, I was able to self-locate and share more of my stories with them. For future Indigenous research, especially research conducted in a different community, forgetting to self-locating can me damaging.
4) The Hopi and Tewa tribe follow the mother. We take her clan, we go to her village, we live in her house, while the men follow. Paula Gunn Allen's book,

"The Sacred Hoop: Recovering the Feminine in American Indian Traditions", tells stories of the time when women had a significant influence in tribal leadership, politics, ceremonies, war, architecture, life, and so forth. The woman's voice is powerful in the Hopi tribe but after reflecting on the current times there is indication that the woman's voice with the house is slowly diminishing. The home is much a resemblance of a Hopi woman. The women in Hopi culture are not only the caretakers of the house but they are the ones who can relate to the concept of home the most. The creator gave women the ability to give life and the patience to care and nurture that life. The home is the same. It cares and nurtures the lives within and it will always love each generation. Receiving a female perspective and stories with the house can be explored further in terms of the clan system and them being the fire keeper of the home.

5) One such hot topic that can be further studied is determining if Indigenous architecture should be designed and built by Indigenous people. There is agreements and disagreements that all Indigenous architecture must have been designed and built by Indigenous people. However, if that be the case a lot of discussion would be on the fact that traditional architecture is the only true Indigenous architecture because it is guaranteed that those buildings were designed and built by Indigenous people. In the architecture world there are not many Indigenous people who sit in these professional positions to contribute to Indigenous architecture. If we were to base Indigenous architecture solely on the fact that the design and the construction has to be produced by Indigenous people then we wouldn't have modern Indigenous architecture. I gave a presentation in

school about Johnpaul Jones and a few of the buildings he designed. Johnpaul Jones is a Cherokee architect who works in the firm Jones and Jones. Some of their work consist of zoos, parks, museums, and education buildings. One of his buildings that he helped design was the National Museum of the American Indian. I visited the National Museum of American Indian in the fall of 2008. The NMAI possess one of the most extensive collections that represent over more than 1,200 Indigenous cultures.[223] I was at an awe of the massive building that would represent all those tribes. I remember the stone material was the feature that caught my eyes first. It reminded me of the mesa and the earthen architecture I see back home in Arizona. During the presentation I stated that I considered the NMAI building as an example of Indigenous architecture because it not only reflects a variety of Indigenous values but it was also designed by Indigenous people. I was then asked if I would still consider the NMAI building as Indigenous architecture if it were designed by a non-Indigenous group and that the design was the exact same way as we see it today. I found myself at a pause to consider this question. My mind was running over different scenarios. What if, how about, why then, who would? I questioned and considered my answer very carefully before I spoke. I responded with a yes. My reasoning wasn't because there is a lack of Indigenous architects or that the program is meant for Indigenous people. I said yes because if a non-Indigenous design team were tasked to design an American Indian museum and they produced the work that we see today then it shows that they went beyond their knowledge base to represent a

[223] "Collections," *National Museum of the American Indian*, accessed March 16, 2016, http://www.nmai.si.edu/explore/collections/.

community that they knew so little about. They took the effort to learn and appropriately represent cultural elements in the design. I believe if you take the effort to represent a community at the best of your ability then it doesn't matter if you are Indigenous or non-Indigenous. Being Indigenous doesn't automatically make you an expert. Even Indigenous artists and designers are criticized by their peers and themselves about appropriate cultural representation. Indigenous planners and architects do have a leg in the door with Indigenous architecture for they have a better understanding of culture but there is plenty of work still needed to better define Indigenous architecture.

6) "In the United States today, Indian people must be able to demonstrate the ways in which their cultural practices, way of viewing the world, and sense of group identity set them apart as distinctive peoples from the rest of American society…It is true that the very social fabric that once held Indian communities together has been torn apart by the continuing events of the European invasion. Whether local Indian communities are traditional reservation-based communities or new urban communities, they exhibit dramatic levels of poverty and disease." It is unfortunate that many Indigenous communities face these dramatic levels of disturbances. This research is focused on reservation-based communities that may not necessarily reflect the needs of urban communities. They too need better homes that reflect their cultures. Hopefully this study can help with the potential of developing a guideline for the urban environment.
7) There is much more work needed in understanding more Hopi Architectural terms and it's deeper meaning.

Abbreviations

BIA – Bureau of Indian Affairs

G-sheds – Graceland Portable Sheds

HCPO – Hopi Cultural Preservation Office

HTHA – Hopi Tribal Housing Authority

HTPI – Hopi Tutskwa Permaculture Institute

HUD – U.S. Department of Housing and Urban Development

IHBG – Indian Housing Block Grant

IHP – Indian Housing Plan

IRB – Institutional Review Board

NAHASDA – Native American Housing Assistance and Self Determination Act

NAIHC – National American Indian Housing Council

Red Feather – Red Feather Development Group

TDHE – Tribally Designated Housing Entities

UHM – University of Hawaii at Manoa

Sample Interview Questions

Cultural questions about architecture for everyone

1. Is Hopi/Tewa culture important to you?
2. What is Hopi/Tewa philosophy?
3. What cultural aspects are important to you?
4. What aesthetics do you like about Hopi architecture?
5. What building techniques do you know/like about Hopi architecture?
6. What building materials do you know/like about Hopi architecture?
7. What cultural aspects do you know/like about Hopi architecture?
8. Is cultural form/expression important to you?
9. What type of forms/expression?
10. What is the significant to an East facing entrance?
11. Why in the village not all houses have East facing entrance?
12. What is the significant of a counter-clockwise circulation?
13. What other elements should be incorporated into the design of a home? i.e- Piki house, storage room, large family gathering space, etc.
14. What is your philosophy on home stewardship/maintenance?
15. What important Hopi/Tewa life lessons should the youth be learning?
16. Can architecture help enforce those lessons?
17. Do you like our traditional architecture?
18. Is land important to you?

They may not be able to answer but going to ask to see.

19. Do you know any traditional stories about architecture?
20. Do you know any traditional approaches to designing a Hopi home?
21. Do you know the traditional protocols for choosing a site to build a new house?
22.

Questions specifically for elders

1. Ask them about the clan system.
2. Ask them about creation story.
3. Ask them about clan's migration.
4. Discuss with them the current methods you researched.
5. What were the traditional protocols when designing/building a new home?
6. Do you know any traditional stories about architecture?
7. Do you know any traditional construction techniques?
8. Do you know any traditional approaches to community planning?
9. Do you know the traditional protocols for choosing a site to build a new house?
10. Discuss with them the idea of boundary riders
11. Discuss with them the concept of a cultural list for architecture. What can and shouldn't be a part of it.
12. How different is Hopi and Tewa?

HUD housing/alternative housing questions for everyone

1. Does the term house and home mean the same?
2. In your own words, what does a house mean to you?
3. In your own words, what does a home mean to you?
4. What type did you grow up/live in on the rez?
5. Did your childhood home or current home reflect you, your family, and culture? If yes, how?
6. Please name five current housing issues you see/seen in the house you grew up in/currently living in?
7. If any, what features do you like about HUD housing/your house?
8. If any, what are five contemporary architecture features that interest you?
9. What are your thoughts on the planning on Hopi?

Current HUD homeowners only

1. What are the protocols for applying for a HUD home?
2. Were you a part of the design team?
3. If no, how did you end up with the design of your home?
4. Do you wish you were a part of the design team?
5. Is site selection important to you?
6. Were you able to choose your site?
7. If no, how did the HUD department decide where to place your house?
8. If you could choose where would you have had your house placed? Why?
9. What are your thoughts on creating a new housing system away from HUD?
10. What are your thoughts if more cultural initiatives were incorporated into HUD's initiative? Would you still ask them to build your house?

Questions specifically to individuals who worked in construction

1. What materials are used for HUD housing?
2. Do you like working with these materials?
3. What did you think of the design of the house you help construct?
4. Did you put all your effort in constructing that house?
5. If you were to help construct a traditional house would you feel more proud of the project?
6. If you were to help construct a contemporary (incorporating traditional and modern design) Hopi/Tewa home would you be proud of the project? More or less of a traditional home?
7. Do you understand HUD building codes?
8. Do they reflect Hopi/Tewa housing perspective?

Sustainable design questions for everyone

1. Are you interested in alternative materials? I.e.- straw bale material? Adobe material? Earth bags? Rammed earth? Recycled materials? Structural insulated panels? Compressed earth block? Prefabricated?

2. Do you know what passive cooling ventilation is?
3. Do you know what passive solar heating is?
4. Do you know what insulation is?
5. Do you know what thermal mass is?
6. Do you know what solar water heating is?
7. Do you know what solar photovoltaic panels are?
8. Do you know what wind turbine are?
9. Do you know what rainwater harvesting is?
10. Do you know what greywater irrigation is?
11. Do you know what radiant floor heating is?
12. Do you know what composting toilets are?
13. Do you know what a green roof is?
14. Do you know what LEED certification is?
15. Is it important to you to include, if any, some of these sustainable design approaches?

<u>Form of communication for everyone</u>

1. What is the best way to communicate an idea to you? I.e – storytelling, reading, visuals, etc.

Consent to Participate in the Hopi Culture and Architecture Research Project:

BriAnn Laban, Principal Investigator

Hopi Culture and Architecture; Oral Traditions Research Project

My name is BriAnn Laban. I am a graduate student with the Department of Architecture at the University of Hawai'i (UH). I am conducting an architecture research project to collect and understand the Hopi and Tewa people's perspective and experience with Hopi culture and Hopi architecture. The title of this work is, *A Hopi House Design Guideline: Incorporating Culture into the Design.* I am asking for your participation in this project, because you have direct experience with this subject matter.

Activities and Time Commitment: If you agree to participate, I will interview you once or twice at a time and place convenient to you. The interview(s) will last between 60-120 minutes each. I will record the interviews using a digital audio recorder. The interviews will be informal and conversational. I want to get your personal stories about Hopi architecture and Hopi culture.

After the interviews, I will be providing key terms and summarizing key ideas in reference to the time frame it was spoken. Quotes from interviews from approved transcriptions will be typed for publication. The Hopi people desire to protect their rights to privacy and to Hopi Intellectual Property. Due to the continued abuse, misrepresentation and exploitation of the right of the Hopi people, it is necessary that guidelines be established and strictly followed so as to protect the rights of the present and future generations of the Hopi people.

Enforcement of this protocol requires a cooperative spirit. The Hopi people may share the right to enjoy or use certain elements of its cultural heritage, under its own laws and procedures, but always reserves a right to determine how shared knowledge and information will be used. The collective right to manage our cultural heritage is critical.

Users will be permitted to use, in unpublished works, short excerpts from any of the transcription quotes within the document without obtaining permission as long as proper credit is given to the interviewee (you), interviewer (me), and the Hopi Tribe. At the completion of the project, I would like to store the digital audio files of my interviews with the Hopi Cultural Preservation Office digital archives, unless told otherwise by the interviewee (you) that the stories provided shouldn't be stored. The purposes of storing these files are to:

(a) Maintain a "living" audible file of the interviews, as they sounded, and
(b) With the permission of the Hopi Cultural Preservation Office, permit students, faculty, researchers, and the public to listen to the interviews.

Voluntary Participation: Your participation in this project is voluntary. You may withdraw from participation at any time, until the completion date of this project which is expected to be May, 2018. During the interviews, you can choose to not answer any question(s) at any time for any reason. If you disapprove of, wish to change, add to, delete, or otherwise change the transcripts or the audio file of the interviews, you may do so at any time up to the completion of this project. If you decide that the transcripts and/or audio files should not be archived, we will end the project.

Benefits and Risks: There is no direct benefit to you in participating in this research project. Your participation will contribute to the creation of a Hopi Housing Design Guideline. This guideline will be the written record of the authentic oral records and would be made available to scholars and the general public as a reliable Hopi architectural and cultural document. To do that, it is important that your actual name appear as the interviewee on the written quotes in the document. In addition, the summarized transcripts and audio files of the interviews will include your name and personal recollections. Thus, one potential risk to you is a loss of privacy. However, if you choose not to have your name on the record, stating the village you are from is appropriate as well. Another possible risk is that some topics you discuss during the interviews might bring back painful or unpleasant memories. In such cases, we can take a break, skip that topic, and/or you may choose to stop participating altogether.

Privacy and Confidentiality: In order to accurately document this historic event, it is important that your name appear as the interviewee on the transcript and/or the written quotes in the document. You retain the right to change, delete, or add information in the transcripts and audio files. However, if you choose not to have your name on the record, stating the village you are from is appropriate as well.

Questions: Please contact me, BriAnn Laban, at (928) 380-4949 if you have any questions regarding this project. You may contact the UH Human Studies Program at (808) 956-5007 or uhirb@hawaii.edu to discuss problems concerns, and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit httyps://www.hawaii.edu/researchcompliance/information-research-participants for more information on your rights as a research participant.

Agreement to Participate in
Hopi Culture and Architecture; Oral Traditions Research Project

"I certify that I have read and that I understand the information in this consent form, that I have been given satisfactory answers to my questions concerning the project, and that I have been told that I am free to withdraw my consent and to discontinue participation in the project at any time without any negative consequences to me.

I herewith give my consent to participate in this project with the understanding that such consent does not waive any of my legal rights."

_____ _____

Printed Name of Interviewee Signature of Interviewee

_____

Date

Keep this copy of the informed consent for your records and reference.
If you consent to be in this project, please sign the signature section below and return it to BriAnn Laban.

Signature(s) for Consent:

I give permission to join the research project entitled, *A Hopi House Design Guideline: Incorporating Culture into the Design*

Please initial next to either "Yes" or "No" to the following:

_____ Yes	_____ No	I consent to be audio-recorded for the interview portion of this research
_____ Yes	_____ No	I consent to being video-recorded for the interview portion of this research.
_____ Yes	_____ No	I give permission to allow the investigator to use my real name to be used for the publication of this research.
_____ Yes	_____ No	I give permission to allow the investigator to use my village to be used for the publication of this research.
_____ Yes	_____ No	I give permission to allow the investigator to store the audio recording(s) with the Cultural Preservation Office.
_____ Yes	_____ No	I give permission to allow the investigator to store the written transcription(s) with the Cultural Preservation Office.

Name of Participant (Print): _____

Name of Village (Print): _____

Participant's Signature: _____

Signature of the Person Obtaining Consent: _____

Date: _____

UNIVERSITY of HAWAI'I® SYSTEM

Office of Research Compliance
Human Studies Program

TO:	Meder, Stephen, Arch.D., Architecture, University of Hawaii at Manoa
	Laban, BriAnn, Architecture, University of Hawaii at Manoa
FROM:	Rivera, Victoria, Interim Dir, Ofc of Rsch Compliance, Social&Behav Exempt
PROTOCOL TITLE:	A Hopi House Design Guideline: Incorporating Culture into the Design
FUNDING SOURCE:	NONE
PROTOCOL NUMBER:	2016-30738

NOTICE OF APPROVAL FOR HUMAN RESEARCH

This letter is your record of the Human Studies Program approval of this study as exempt.

On November 02, 2017, the University of Hawaii (UH) Human Studies Program approved this study as exempt from federal regulations pertaining to the protection of human research participants. The authority for the exemption applicable to your study is documented in the Code of Federal Regulations at 45 CFR 46.101(b) 2, 4.

Exempt studies are subject to the ethical principles articulated in The Belmont Report, found at the OHRP Website www.hhs.gov/ohrp/humansubjects/guidance/belmont.html.

Exempt studies do not require regular continuing review by the Human Studies Program. However, if you propose to modify your study, you must receive approval from the Human Studies Program prior to implementing any changes. You can submit your proposed changes via email at uhirb@hawaii.edu. (The subject line should read: Exempt Study Modification.) The Human Studies Program may review the exempt status at that time and request an application for approval as non-exempt research.

In order to protect the confidentiality of research participants, we encourage you to destroy private information which can be linked to the identities of individuals as soon as it is reasonable to do so. Signed consent forms, as applicable to your study, should be maintained for at least the duration of your project.

This approval does not expire. However, please notify the Human Studies Program when your study is complete. Upon notification, we will close our files pertaining to your study.

If you have any questions relating to the protection of human research participants, please contact the Human Studies Program by phone at 956-5007 or email uhirb@hawaii.edu. We wish you success in carrying out your research project.

1960 East-West Road
Biomedical Sciences Building B104
Honolulu, Hawai'I 96822
Telephone: (808) 956-5007
Fax: (808) 956-8683

THE HOPI TRIBE

Timothy L. Nuvangyaoma
CHAIRMAN

Clark W. Tenakhongva
VICE-CHAIRMAN

License No. 16-00

Issued to: BriAnn Laban (928)380-4949 blaban@hawaii.edu
P.O. Box 10, Polacca Az 86042

Period: November 21, 2016 – December 31, 2018

Purpose: License No. 16-00 is issued pursuant to the interim policy titled Protocol for research, Publications, and Recordings: Motion, Visual, Sound, Multimedia and Other Mechanical Devices from the Hopi Tribe's Cultural Preservation Office, hereafter referred to as protocol, and Ordinance 26, to establish guidelines for the BriAnn Laban attached proposal entitled

Permission is granted with restrictions documented within this permit.

General Conditions:

1) This permit only allows those activities regarding this project. Any activities beyond this study on the Hopi reservation are not allowed under this permit.
2) This permit requires BriAnn Laban to provide the assurance that concerns of the Hopi people regarding traditional knowledge and rights to privacy are addressed during the study.
3) No students or minors will be interviewed for this research study.

Specific Conditions:

This permit requires BriAnn Laban to perform this study with the assistance and under the guidance of the Hopi Tribe Cultural Preservation Office.

BriAnn Laban shall provide the Hopi Tribe Hopi Cultural Preservation Office with the products specified in the proposal for this study and appear before the Cultural Preservation Office or as requested to present results.

The Cultural Preservation Office will be consulted for appropriate review and input regarding

All interviewees will be provided the Hopi Cultural Preservation Office Informed Consent letter and Release Form.

No publication beyond the initial purpose is permitted without prior review and permission of the Hopi Tribe Hopi Cultural Preservation Office. This permit requires BriAnn Laban to provide copies of all source materials used for this project to the Hopi Tribe Hopi Cultural Preservation Office.

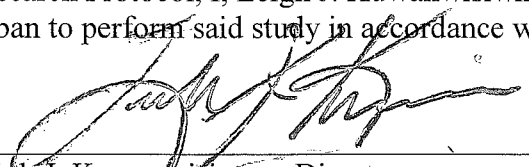
Photography and recording will not be conducted in public in the Hopi Villages.

This permit does not convey, transfer or otherwise divest the Hopi Tribe of its legal interest in Hopi intellectual property. Hopi consultants are to be fully appraised of the purpose of any inquiries, and shall be ensured rights to privacy. Each Hopi participant shall have a signed informed Consent form in place pertaining to this project prior to and for the duration of this research.

BriAnn Laban through acceptance of this permit, shall save and hold harmless the Hopi Tribe from all personal liabilities in case of injuries, death and damage or loss of property resulting from activities conducted pursuant to this permit.

This license may be terminated by either party for cause by giving ten days written notice. All research material obtained up to the termination will be turned over to the Hopi Tribe.

Pursuant to the authority of Ordinance 26 and the Hopi Tribe Cultural Preservation Office Research Protocol, I, Leigh J. Kuwanwisiwma, hereby issue this License No.16-00 to BriAnn Laban to perform said study in accordance with the provisions stated herein.



Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

11-28-16
Date

Read and agreed to by:

BriAnn Laban

11/20/16

THE HOPI TRIBE

Timothy L. Nuvangyaoma
CHAIRMAN

Clark W. Tenakhongva
VICE-CHAIRMAN

Hopi Cultural Resources Advisory Task Team Meeting
Tuesday, March 20, 2018

Hopi Resources Enforcement Services Conference Room

9 am — Natasha Hale, Brandy Hurt, Julia Guarino
Bears Ears Cultural Resources Committee

11 am — BriAnn Laban
University of Hawaii
Hopi Architecture

Department of Natural Resources Conference Room

1:30 pm — Casey Cook Collins, Gwen Gallenstein, Lisa Leap
National Park Service
T.J. Ferguson
Wupatki National Monument
Ethnographic Study

3 pm — CPO Reports

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